THE FARMERS' REGISTER.

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EDMUND RUFFIN, EDITOR AND PROPRIETOR.

HUSSEY'S REAPER.

For the Farmers' Register.

I see, by your last number, you decline recommending Hussey's reaper, for the good and sufficient reasons, that you had not seen it work, and those who have tried it differ in opinion. Letters recommendatory in our country, both of men and things, are often too easily obtained, and I approve your caution.

A few of Mr. Hussey's first invention have been in use in this, and the adjoining county of Talbot, for two years, and I understand those who used, approve them. When I went into his shop last year to get one, I was offered his first and second invention; I preferred the latter, on account of the machinery being less complicated, and I was in some degree influenced by learning that a gentleman of your state, whose intelligence I estimated by his writings in the Register, had preferred it.

I have not, as yet, from my own experience, been able to decide on the value of the reaper, though I must confess my expectations are much in favor. It broke early in harvest, and I did not get it well repaired till towards the close. I then, for parts of two days, cut some strong wheat, afterwards my oat crop, and also my clover for seed, much to my satisfaction. Mr. Hussey's reaper may still be considered in experiment. An efficient wheat cutter is a great disideratum in agriculture; and, perhaps, the best means of improvement will be found in exposing its imperfections. The defects which I ascertained were, the part on which the lever plays (which I call the perch) could not sustain the impulse of the lever, being made of cast iron, and the knives could not be set to cut higher than nine inches, which cut more straw than was useful, and also grass among the wheat; this imposed unnecessary labor on the horses, and a heavy strain on the machine. The first defect I corrected, by substituting a perch of wrought iron. Mr. Hussey was here towards the close of harvest, and I pointed out to him the second defect; at his request, I sent the reaper to Baltimore last fall; he has returned it within a few days, and it may now be set to cut high or low.

An implement, which promises an important improvement in agriculture, is a matter of as much interest to farmers, as a measure of national policy to politicians, and ought to be freely discussed, and will generally be sooner decided. I observe, from some late movements in congress, that a national bank and a protective tariff, are still considered open questions, though they have been under discussion for forty years. RUSTICUS.

Queen Ann's Co., Md., 18th Feb., 1841.

POUDRETTE AS A MANURE.

From the New England Farmer

The following practical farmer's analysis, or the results of experiments made with poudrette, as compared with other manures, and by itself, may be of interest to some of your readers; and will tend to show the high value of the article—and especially of that prepared by Anthony Dey, esq., of New York, which he has represented as being a much better article than that referred to below; of the correctness of those representations, however, I imagine other proof than his assertions or analysis will be required by those who know us both, at home. Of their correctness or incorrectness, however, I am willing to let those judge who use the articles.

A gentleman in Westchester County, New York, planted a piece of corn last season, on which he put only half a gill to the hill; of which he gives me the following account. I use his own language, which is as follows:

"For corn, I think no other manure can come in competition with it. I planted, last season, on sward land turned over (being first manured with common yard dung,) the ground rolled very flat, and harrowed, no plough used afterwards, the rows being marked by an ox chain drawn on the ground, the corn dropped, and half a gill of poudrette immediately put on the corn, and lightly covered with the hoe. This was done from 25th to 28th of May, as the weather allowed. More than a fortnight after my neighbors had planted, I was told by many who saw the manner and time of planting, that I should have no crop, but in three weeks, my corn was farther advanced than any near me; and it continued of the finest color, and was the best field of any I saw through the season. It was cut up and removed from the field on the first of September, and when husked, turned out the least soft corn that I ever had, in proportion to the good corn. I can attribute this quick and good growth to nothing but the poudrette; as the land was not well tilled, the corn only having had one good hoeing after it came up; the cultivator was run through it twice."

Thus it will be seen that it may be used in very small quantities, and yet produce very satisfactory results.

Another gentleman, on Long Island, says that he used a gill to the hill of corn, and he had as good corn from it as where he used a *shovelful of good yard manure* in the hill; and that the worms were much less troublesome where the former, than where the latter was used; and others have made the same remark in relation to insects.

On wheat it has been applied experimentally in different quantities. Twenty, thirty, forty, and even seventy bushels have been applied to the acre. A gentleman on Long Island says:

"I used it also on wheat, at the rate of 40, 60, and 70 bushels to the acre. That on which I put forty bushels to the acre, produced as good wheat as where I put forty wagon loads of stable and barn yard manure—and equally as good as where *sixty* or *seventy* bushels of poudrette were used. I also used it on all kinds of garden vegetables, and never had better success. I consider it better for corn *in the hill* than *bone*."

Another gentleman who has used it three years, says, under date of "Smithtown, L. I., Aug. 9th, 1840:"

"My wheat came in well where I used poudrette last fall. It stood the winter well, and the berry is fine; but where I used bone, about the same cost to the acre, in the same field, it was winter killed, very much shrunk, and I should judge that there would not be over half the number of bushels per acre. Where I used poudrette this spring, the result is very favorable. I used it on corn by the side of the best yard manure; thus far, it is decidedly the best; and I have no reason to doubt but that it will continue so through the season. I also used it in my garden, and it never looked better."

Another gentleman, also residing on Long Island, one of the earliest experimenters with poudrette in this country says:

"I have used poudrette for three years, on nearly all the varieties of crops usually cultivated on farms in this country, and am entirely satisfied with its results. I consider its introduction singularly fortunate to the farming interests in this vicinity."

I will refer to but one other gentleman at this time. He is also a resident of Long Island, one of the earliest, now one of the largest shareholders of the company. He received last year over fifteen hundred bushels on account of dividend. He says:

"Another year's experience in the use of poudrettee, has, if possible, increased my confidence in its great utility. My opinion of its high value on most crops was expressed in a former communication, and has been fully confirmed. The past season, I applied it principally on oats and wheat. It may be sufficient to say, the result was entirely satisfactory. Indeed, the convenience and advantages resulting from the use of this article are so great, that one accustomed to possess them would hardly think himself able to carry on farming without it."

I could increase these statements if it were necessary, but I will leave the subject with the simple remark, that the practical farmer or purchaser will find more safety in relying upon the character of those who prepare it, than upon an *analysis* got up by one party for *effect*. As I have before said, I court investigation, and am willing to abide the result of experiment.

By a reference to the advertisement in your paper, those who desire to make an experiment will learn how it may be obtained.

I am, sir, respectfully yours,

D. K. Minor.

We shall insert on the cover the advertisement referred to above; and this, as well as this article, will be published, not for any pay or profit, direct or indirect, to us, (however usage may have caused such benefit to be deemed legitimate,) but for the information and benefit of the agricultural public. Mr. Minor was formerly the proprietor and publisher of the New York Farmer; and was the first person in this country to commence and carry on the business of preparing *poudrette;* by which excellent service will be rendered both to the improvement of agriculture, and to the cleanliness and healthiness of towns. We have long urged, (by different means, the mixture with calcareous earth,) the utilizing, in all towns, of this great source of fertility, if used as such, or of filthiness and disease, if neglected, as is almost universal; and we consider as a public benefactor, and one of high rank, the man who has first shown the practical value of the product, and shall establish, and cause to be extended, the business of preserving from waste, and putting to the best use, the materials of poudrette.—Ed. F. R.

From the Farmers' Cabinet.

POUDRETTE.

Sir,—I am desirous of knowing if any of your readers, in this part of the country, have used the manure denominated poudrette, in a way to be able to speak decidedly as to its relative merits, and the best mode of application.

In an advertisement put forth by the "New York Poudrette Company," which has fallen into my hands, the account is, of course, flattering; but it would be more satisfactory if some of our friends *on this side the water* could join their testimony, resulting from actual experience. That the article is powerful in its efficacy, it is but reasonable to conclude, but from observations that have fallen from some who profess to have used it, one would be led to conjecture that its effects would not be very lasting, on the principle, perhaps, that what is violent is seldom permanent; nor would it appear certain, that the opinion, as to its suitableness for autumnal use, is as flattering as for spring dressing: to be sure, the introduction of the article to notice, is but of recent date, and it might require a longer time, to enable one to form a just opinion of its relative value; yet, in the hands of a disinterested practical man, the matter might soon be decided. I take leave to use the term *disinterested*, seeing that the testimony in its favor, contained in the bill of advertisement, comes from persons whose names appear on the list of stockholders of the company. But I have no desire whatever to detract from its merits, far otherwise, for if it can be shown that the poudrette is only equal, in value, to the manure usually purchased, the difference in the cartage will be quite sufficient, in the judgment of every practical man, to decide all questions in its favor. No one but a practical man could calculate the labor, and particularly, the *value of the time* expended in carrying two hundred loads of manure per annum, a distance of three miles, to the farm! it is monstrous even to think of; but he will soon *calculate* the difference between carrying twenty loads of manure, and thirty bushels of poudrette, which are accounted equal in fertilizing properties, and this will be decisive with him.

The use of this article has long been known in England by the name of "desiccated night soil," and large quantities have been sent to the West Indies for manuring their cane lands, for which it is understood to be very suitable; while in the fields around London, immense deposites are found in preparation in all its different stages. I have, however, an idea that its use is more approved as a dressing for grass, or artificial green crops, than for grain, for which it is considered too strong, being apt to engender the rust. How far the pu-

rifying process of forming it into poudrette has sweetened its influences, is a question which I should be glad to see decided. On every part of the continent of Europe, *night soil* is highly valuable for its fertilizing powers; but as the inhabitants are not such a beef-eating community as we are, it is of importance that every opportunity for accumulating manure should be embraced. But in China, we are told, it reaches its intrinsic value, being there considered like "old gold," and hence, perhaps, it is, that "night men," in England, are named "gold finders." I remember once working a mine of this sort, which, having mixed with earth and exposed abroad until it was purified, I used as a top dressing for wheat, in the spring: the effect was astonishingly great, the straw and ears being twice as large as those in any other part of the field; but it was completely destroyed by the rust, while the remainder of the crop was free from blight of every description, and proved a fine sample. And I was reminded of this experiment when reading the note at page 179 of the Cabinet for January, where it is said that much of the injury which is placed to the account of canker, mildew, &c., will, on investigation, prove to originate in the unwholesome supply of *impurity* of food: and this, I have no doubt, is the fact.

In the hope of receiving, through the pages of the Cabinet the information which I am seeking on this important subject,

I am, respectfully,

JACOB SMITH.

Bucks County.

We always like the appearance of the caution, and even distrust, which are exhibited in the above article, and very willingly give it a place next to the one preceding it, conveying different views. There is not the least ground left to doubt the great richness and value as manure of human excrements; and if the manure prepared from it is not as valuable, it can only be because the mode of preparation is so defective as to cause much of the rich principles to be wasted in the process of desiccation.—ED. F. R.

MAKE THE WIND WORK—HO!

From the Farmers' Cabinet.

I have lately been gratified to learn that a friend of mine has applied a *windmill* to his barn pump, for the purpose of raising water for his stock. It is said to cost only a moderate sum, and to work well—so well that it is likely to come speedily into general use. The plan which he has adopted is said to be essentially the same as was proposed in the Farmers' Cabinet, vol. 2, p. 162.

This means of working a pump seems particularly well adapted to the purpose of watering stock, and is equally applicable to the barn yard and the pasture-field, whether the water is derived from a well or neighboring stream. The wind, however, is objectionable as a *pumper*, unless closely watched. Some times he wont work at all—sometimes he will work too fast. At one time he will lie still, in spite of all our promptings—at another time he will work furiously for a whole night, when we would wish him to sleep. He has so many *eccentricities*, that it is absolutely necessary to employ some management, and contrivance, before we can fairly depend upon his services. By the proper use of these *restrictions*, he may become a valuable farm laborer.

1. If he will pump too much water, so as to drain the well improperly, a *ball-cock* and return pipe may be fixed, so as to return the surplus water into the well.

2. If he will work all night, the pump may be thrown out of gear, so as to stop it.

3. If he will sometimes run too fast, a *regulator* may be so contrived as to equalize the motion. This may be done in several ways.

a By means of friction-lock. This may be so fixed that the friction will increase with the strength of the wind.

b The wings may turn on pivots, and rest on springs, so as to yield to the increasing force of a gale, and thus lessen the surfaces exposed to the wind.

c The obliquity of the wings may be changed by the centrifugal force of weights, and counteracting spring. Or,

d The wings may be made to slide on the arms. This may be effected by means of weights sliding on the backs of the arms, and connected by cords with the opposite wings; the weights must be such, and so adjusted by springs, that as the velocity increases, the centrifugal force will carry them outwards, and draw their respective wings nearer the centre. I would be glad if some competent person would give us a complete description and drawings of a wind pump on the best plan, its dimensions and mode of construction, so as to enable us to have them erected.

AQUA FONTANA.

Chester County.

GLANDERS AND FARCY.

From the (London) Sporting Magazine, for January, 1841.

The liability of grooms and all persons going about glandered horses to be infected with those diseases; and prophylactic measures to be had recourse to against their baneful influence.

The subject of glanders must always be one of lively interest to the hunting and racing sportsman: indeed, when we consider the direful consequences resulting from that disease when it once breaks out in a valuable stud, we know of no other topic which has a stronger claim upon our attention.

A very few years have elapsed since the allied diseases, glanders and farcy, were considered as belonging exclusively to the horse, the ass, and the mule. The results of scientific inquiry have overthrown that opinion, and have proved that these affections are not confined to the quadrumina, but that the human subject is as liable to be affected as either of the animals above-named. It has, moreover, been fully ascertained, that glanders and farcy can be transmitted from man to the horse by *inoculation*, and *vice versa*. These are practical truths of much importance to the sportsman, truths which cannot be too well or too

extensively known, as we have lately seen amply proved and illustrated at the "Ecole Veterinaire" of Alfort, near Paris. Presuming that some information on these subjects would prove useful as well as interesting to the readers of "The Sporting Magazine," we propose in the following articles to lay before them a succinct view of facts and experiments relating to the disease both in man and in the horse, and, by interlarding the subject with some incidental matter, we hope to divest it of the dryness of detail—in a word, to blend together, as far as lies in our power, the *utile et dulce*.

M. Waldinger, veterinary surgeon at Vienna, was the first to direct attention to the liability of man to be affected with glanders. He states "that the greatest precaution is necessary in going about glandered horses, or those that died from glanders or farcy, as the severest injury and even death often arise from inoculation."

M. Lorin published some observations shortly after on the same subject, in which he mentions that a groom had his fingers affected with inflammation in consequence of operating on a farcied horse: tumors precisely similar to those observed in the horse were soon developed in this man's limbs; they were cut out, and he was ultimately cured by filling the wounds with small pieces of lint or cotton steeped in turpentine.

Sidon, another veterinary surgeon, published a paper about the same time, in which he stated that glanders was transmissible from the horse to man, causing the worst kind of ulcers; and mentions an instance where a horse took the disease from a farrier who had a glandered sore on his hand, which came in contact with the animal while he was giving it a ball—both died of the disease.

We might multiply instances of a similar bearing from foreign sources, but these will suffice.

We shall now briefly narrate facts which came under our own immediate observation.

A groom named Prost slept in a stable at Paris occupied by a glandered horse. Some days after the death of the animal, Prost was attacked with the same disease, which was characterized by pustular and gangrenous sores over the body, in the nose and throat, below the ears, on the glans, and on the feet. He died on the 12 h of last February. On the evening of Prost's death, a small quantity of matter was collected on watch glasses from the gangrenous sores beneath the ear, on the fore-arm, and from the back and shoulder. A foundered mare was immediately inoculated by a veterinary surgeon with the different portions of matter.

First, at the right nostril he inoculated the matter by three punctures, of which two were within the nostril and one external: the two first punctures gave rise to a weeping of blood; but the other produced scarcely any. *Second*, on the white part of conjunction of the right eye he applied a small quantity of the matter. *Third*, at the internal and upper part of the right buttock he inoculated the matter by three punctures. *Fourth*, at the internal part of the right armpit he also inserted the matter by three punctures. The left side of the animal was inoculated in a similar manner.

MM. Leblanc, Dupuy, Vigla, and Desir, gentlemen belonging to the Veterinary College, were present at the inoculation of the horse. A diary of the different results was kept.

On the 13th and 14th no appreciable change could be observed in the state of the parts inoculated. On the evening of the 15th, at 7 o'clock, slight circular and circumscribed redness and swelling were observable round the punctures on the right buttock; at the centre of the swelling a depression was seen corresponding to each puncture: there was a painful swelling in the region of the left buttock where the punctures had been made. The circumference of the wings of the left nostril were a little tumefied; there oozed a small quantity of pale colored fluid from the internal wing; there was also effused a small quantity of serum from the internal wing of the right nostril; but the circumference of the punctures was not so swollen. The pulse was natural, forty-eight pulsations in a minute.

On the 16th, at seven in the morning, no change was observed. In the evening the symptoms of inoculation were beginning to be marked.

17th.—At eight in the morning the tumefaction of the punctures was increased; the tumors are more hot, harder, and more painful. On the side of the upper lip, near the angle of the mouth, two elevated bands were observed about an inch in thickness, elongated, irregular, and slightly painful. The left eyelids are greatly swollen, and the conjunction red. The air expired by the animal has a disagreeable odor, and the nostrils are smeared with fluid. The pulse still natural; the animal eats well.

18th.—At seven in the morning: the nodulated tumors of the right buttock are united by a band of lesser ones, very hot and very painful: there flows from the nostrils a fluid more colored and more abundant than was yet observed. Now mark the rapid advance of the disease.

19th.—The circumference of the punctures in the nostrils appears more tumefied, especially on the left side; the respiration is more difficult; all the tumefied parts are very painful; the animal eats very little, and that little with difficulty.

20th, morning.—Exasperation of all the symptoms; the band on the upper lip is greatly increased, and very painful; all the tumors are circumscribed, and terminate abruptly, precisely like those peculiar to *farcy*; the animal with much difficulty is enabled to open her mouth to take food.

21st.—The symptoms of injection were still more marked, and the local pain greatly increased. The disease still proceeded steadily in its course for some days; and on the twenty-first day from the period of inoculation, the unfortunate animal was killed, after having presented all the characteristics of *glanders* and *farcy*. After death the diseased portions of the horse were excised, and on careful examination were found to be exactly the same as those commonly found in glandered animals.

Several useful inferences may be drawn from the foregoing detail. In the first place, it proves beyond a doubt that it was glanders the man died of, as a horse otherwise healthy was impregnated with that disease by the inoculation of matter taken from Prost after death. Every one knows that the horse usually takes the disease, without being inoculated, by *contagion*, as it is called; but until the foregoing inquiry was instituted, it was

believed that the human subject could not take glanders without inoculation. The reader will bear in mind that the man Prost merely slept in a stable where died a glandered horse, and, further than this, had no connexion whatever with animals so diseased; hence we may reasonably conclude that this unfortunate man took the disease by *contagion*, and not by inoculation. This conclusion should serve as a warning to all—to gentlemen as well as grooms, ostlers, farriers, *et hoc genus omne*—how careful and cautious they should be when necessity obliges them to have any connexion with glandered horses.

About the same period, or shortly after, M. Leone, a veterinary surgeon to a dragoon regiment, twenty-nine years of age, and in perfect health, had to open a farcied abscess developed in a horse belonging to his regiment. After the operation, he introduced his hand into the cavity, which was covered with matter, in order to explore the extent of the sore; unfortunately he had at the time a slight scar or abrasion on the index finger of this hand, which changed its appearance in a few days: it increased in size, became very painful, and covered with fungus-like growths. The wound was cauterized, but did not heal for three months. Three days after the operation, and at the same time that the sore on the finger was advancing, M. L. recognized the presence of several painful hard tumors like those of farcy developed at the inside of the left elbow: soon after, the joint itself became painful and swollen; an abscess formed, and was opened; others succeeded; fistulous sores were established, and to this day the arm is still diseased. Six weeks after the operation, the right knee-joint became painful and swollen; the tumors here did not break, but the disease attacked the instep and foot, which were swollen and painful; tumors formed, and soon broke, and still remain open. M. L. had the assistance of several physicians, but without any success. He alleges that he knew many veterinary surgeons who were afflicted with the same unfortunate malady derived from the same source. The foregoing is an example of inveterate chronic *farcy*.

Very recently we have seen in this metropolis two instances of men suffering from farcy and glanders: one was a groom, the other a farrier. The former was taking care of a glandered horse, and had a small puncture on one of his fingers at the time, which soon began to throb, and on examining it found a dark spot round the puncture; swelling of the second joint of the same finger soon followed, and thence passed on to his arm: so rapid was it in its course, that he was obliged to cut the sleeve of his coat to enable him to withdraw the arm at night; this broke and ulcerated, and shortly after the left leg began to swell and feel hard and knotty. Although this man suffered from incessant pain and want of sleep, it is worth remarking, that the only thing which seemed to cause him any anxiety was the fear (to use his own expression) that "*he had given the disease to a horse that was perfectly sound when he went to attend it, but soon became glandered.*" His own suffering seemed to be lost in this idea.

These are melancholy details, but is it not better that they should be known? They lead us irresistibly to the following general conclusions—first, that a man is liable to the infection of glanders, a disease hitherto supposed to be peculiar to the horse, the ass, and the mule;—second that farcy, which is only a modification of glanders, may co-exist with that disease, as has been proved by inoculating the virus of the two diseases; as with farcy you may produce glanders, and *vice versa*:—third, that inoculation is not absolutely necessary for the production of glanders or farcy, as sometimes the simple cohabitation with glandered animals seems to produce these diseases effectually, from which we are led to infer that it is contagious:—fourth, that glanders, in its severe form, seems to be an incurable malady, both in man and the horse.

Prophylactic measures, &c.—Although it is very true that sportsmen—that *gentlemen* themselves—rarely meddle with glandered horses, it by no means follows that they should not possess information which might be useful for those in their service who may be obliged to do so; and as there is *no cure* for glanders, every precaution should be taken to *guard against* that *memento mori* disease. The following simple measures are those which we can recommend from considerable experience. Whenever an animal is suspected of being glandered, the groom or person attending it should make a *strong solution of alum*, and keep it by him in the stable: as often as he has occasion to go near the horse, to dress his sores, open an abscess, remove the halter, or administer medicine, he should immerse his hands in the alum solution, and keep them there for some moments; if there is a *cut* on his hand it should be carefully covered with adhesive plaster previously. This is not a mere quack remedy, and anatomists know that well; for prior to examining a brain, the most dangerous part of the dead human subject, they use this very remedy in the same way. Alum is an *astringent*, and by this property it can for a certain time stop the pores of the skin of the hand, and consequently prevent any *absorption* of poisonous matter from taking place. Perhaps *other* astringents, as sulphate of copper, would answer as well, but alum is cheaper, easier managed, less dangerous, and equally efficacious. ERINENSIS.

WATERING PLACES—HOOF AIL.

From the New Genesee Farmer.

Messrs. Editors—In an editorial article in the December number of the "Cultivator," page 184, are remarks on the subject of watering cattle in winter, some of which appear to be objectionable. The sentiment to which I refer is, "that it is no disadvantage to cattle to go a suitable distance to water, but rather a benefit, as promoting circulation in the feet, and thus preventing disease of the extremities." The same idea is advanced in the February number of the same paper, page 22. And putting both articles together, we should conclude the "suitable distance" for cattle to travel for their water in winter was from fifty to one hundred rods. And the *advantage* set forth is the exercise which prevents what is called the hoof ail.

"Now it strikes me very forcibly," as the judge says, that this course, both in theory and practice,

is, to say the least, somewhat objectionable. It is the opinion of many, that cattle should not be compelled to go out of their yard for water; and the following among other reasons are adduced. If water cannot be obtained by cattle without travelling one fourth of a mile, they will many times suffer exceedingly for the want of it, rather than go so far for it. If good fresh water can be had by them without going out of the yard, they will drink very much *oftener* than in the other case, especially in cold weather. Again. The oldest and strongest cattle will generally go first to water. When they have drunk, they return, and on their way meet others in the narrow snow-path, and of course drive them back. In which case, the youngest and most feeble of the herd will have much trouble and vexation in obtaining water at all. And again. The amount of manure which is dropped, and for the most part lost, in such case, is very considerable in the course of the winter, and it is by many farmers esteemed a matter of no small importance that *all* the manure should be saved. Some say, even, that they may as well waste the food of cattle as the food of plants.

And besides, when cattle go to a spring to drink, especially if the snow is deep, there will generally be great difficulty in reaching the water on account of the bank of snow and ice, unless they step into it, which cattle are very unwilling to do. I have seen many watering places where cattle, in order to obtain a drop of water, were obliged to get down upon their knees, and even then obtain it with the greatest difficulty.

Neither do I believe the *exercise* of this travel of cattle a considerable distance to water is of any advantage in preventing the hoof ail. But I am very strongly inclined to the opinion, which was advanced some time since by Gen. M. Brooks of Mount Morris, and also by Heman Chapin, esq., of East Bloomfield, to wit, that the "foot ail," or "hoof ail," as it is called, is the result of the *freezing* of the feet. And it would seem more probable that the feet would become frozen by being first wet or covered with mud, than if they were kept dry and clean.

I believe, therefore, most sincerely, that if cattle are kept in a well enclosed, comfortable yard, with open sheds, or hovels even, for their protection from storms, where they can have free and uninterrupted access to good water, and plenty of salt, the yard kept constantly littered with straw, so as to make it always dry, and the cattle put up every night in a stable filled to their knees with the same article, they will *never* have the "hoof ail."

I know that with many a very strong prejudice exists against wells for the supply of water for cattle. And probably a stronger prejudice prevails against the labor and trouble of drawing it. But the expense of thus furnishing water for cattle in winter is comparatively trifling; when, by an under drain, or any other contrivance, running water can be conveyed into the yard, so much the better. And in many cases this may be done with very little cost. But where this is impracticable I would pump water for all my cattle, horses and sheep, rather than compel them to go abroad for it even though the distance did not exceed thirty rods.

There are several farmers of my acquaintance, whose cattle, if they have any water at all during the winter, are obliged to travel from one fourth to three fourths of a mile for it, and when they arrive at the spot where water can be found it is only to to be obtained by them through a hole cut in the ice, which may be from six to eighteen inches in thickness.

I have a good spring of water about sixty rods from my barn, and for two or three winters drove my cattle to it, every day, especially in cold weather. But since I have dug a well contiguous to my cattle yard, and put a pump in it, I find it much less trouble to furnish water for my stock in the yard than it was even to visit the spring every day to see that is was attainable there. And besides, there is much less quarreling among the cattle, and it is so much more comfortable for them to drink from a trough conveniently situated, that I would not be without this appendage to my barn yard, even though it should cost me $100.

And moreover, all the manure of the whole herd is in the yard, intermixed with the straw and litter thereof, in good condition for spring use, which is a matter of no small importance.

These, and such like, are the reasons why I am opposed to the practice of sending cattle from fifty to a hundred rods for water in winter, expressed, however, with due deference to the opinions of more experienced herdsmen.

Winter protection.—I am aware there are many farmers who think it a matter of no consequence, whether our domestic animals are afforded any protection from the severity of the winter. It is probably true that most of them will *live* through the winter without it, if they are well fed. But are we not taught a lesson on this subject from the habits of wild animals? Not one of them, as far as my recollection extends, is without, or does not provide himself with, comfortable shelter or home for the winter. Are we not told, also, from authority which should not be disregarded, that the merciful man is merciful to his beast? And where is the farmer, who by a profusion of the blessings of a merciful Providence is made comfortable, can be unmindful of his domestic animals, from which he receives his food, and his raiment, and afford them that protection from the chilling blasts of winter, by which they are rendered comfortable not only, but are thereby rendered much more profitable.

Another very great advantage of stabling cattle is the saving of feed from waste. I have seen farmers, otherwise respectable, throw their hay upon the ground when covered with mud and filth, for the food of cattle, horses and sheep all in the same yard. In which case one half, at least, of the hay, was trod into the mud and water. But where cattle are stabled, each having his mess by himself, and then the younger and weaker animals unexposed to the encroachment of the older and stronger, consume their food with peacefulness and contentment, without annoyance and without waste.

Still another advantage to be derived from this course of a plentiful use of straw every day in littering the yard and stable is, the animals are not only kept dry and comfortable, but the straw is all turned to a good account. There are many farmers who seem not to know what to do with their straw. Year after year it is suffered to accumulate in immense piles about the barn, till it becomes a nuisance. But if it is daily scattered in the yard for the cattle to pick upon through the day, and

used for bedding in the stables, it will thus become impregnated with the liquids of the yard and stables and mixed with the animal manure thereof, and thereby the quantity of manure for spring use will be greatly increased. By such a course a small stock, say of fifteen head of cattle, seventy-five sheep, and three horses, will supply three hundred loads of good manure for the corn and potato crop the ensuing season. The straw, thus spread frequently in the yard to some extent, is eaten by the stock, the balance absorbs the juices of the yard, becomes saturated therewith, and its value thus rendered four-fold greater than if it were applied in its dry state.

Yours, &c. W. PARSONS.

Thorn Hill, near Lockport, Dec., 1840.

THE CULTIVATION OF HEMP IN KENTUCKY.

From the Agriculturist.

[The following article, first published in the Complete Farmer, was written by the Hon. Henry Clay.]

The preparation of the ground for sowing the seed is by the plough and horses, until the clods are sufficiently pulverized or dissolved, and the surface of the field is rendered even and smooth. It should be as carefully prepared as if it were for flax. This most important point, too often neglected, cannot be attended to too much. Scarcely any other crop better rewards diligence and careful husbandry. Fall or winter ploughing is practised with advantage; it is indispensable in old meadows, or old pasture grounds, intended for producing hemp.

Plants for seed are ordinarily reared in a place distinct from that in which they are cultivated for the lint. In this respect, the usage is different from that which is understood to prevail in Europe. The seeds which are intended to reproduce seeds for the crop of the next year, are sowed in drills about four feet apart. When they are grown sufficiently to distinguish between the male and female stalks, the former are pulled and thrown away, and the latter are thinned, leaving the stalks separated seven or eight inches from each other. This operation is usually performed in the blooming season, when the sexual character of the plants is easily discernible; the male alone blossoming, and, when agitated, throwing off farina, a yellow dust or flour, which falls and colors the ground, or any object that comes in contact with it. A few of the male plants had better be left, scattered through the drill, until the farina is completely discharged, for an obvious reason. Between the drills a plough is run sufficiently often to keep the ground free from weeds and grass; and between the stalks in each drill the hoe is employed for the same object. The seed plants are generally cut after the first smart frost, between the 25th September and the middle of October, and carried to a barn or stack-yard, where the seeds are easily detached by the common flail. They should be gathered after a slight, but before a severe frost; and, as they fall out very easily, it is advisable to haul the plants on a sled, and if convenient, when they are wet. If transported on a cart or wagon, a sheet should be spread to catch the seed as they shatter out. After the seeds are separated, the stalks which bore them being too large, coarse, and harsh, to produce lint, are usually thrown away; they may be profitably employed in making charcoal for the use of powder-mills. In Europe, where the male and female plants are promiscuously grown together in the same field, both for seeds and for lint, the male stalks are first gathered, and the female suffered to remain growing until the seeds are ripe, when they are also gathered; the seeds secured and lint obtained, after the rotting, from both descriptions.

After the seeds are thrashed out, it is advisable to spread them on a floor, to cure properly and prevent their rotting, before they are finally put away for use the next spring. Seeds are not generally used unless they were secured the fall previous to their being sown, as it is believed they will not vegetate if older; but it has been ascertained that when they are properly cured and kept dry, they will come up after the first year. It is important to prevent them from heating, which destroys the vegetating property, and for that purpose they should be thinly spread on a sheltered floor.

The seeds, whether to reproduce seeds only, or the lint, are sowed about the same time. Opinions vary as to the best period. It depends a good deal upon the season. The plant is very tender when it first shoots up, and is affected by frost. Some have sowed as early as the 1st of April; but it is generally agreed, that all the month of May, and about the 10th of it especially, is the most favorable time. An experienced and successful hemp grower, in the neighborhood of Lexington, being asked the best time to sow hemp, answered, immediately before a rain. And undoubtedly it is very fortunate to have a moderate rain directly after sowing.

When the object is to make a crop of hemp, the seeds are sown broad-cast. The usual quantity is a bushel and a half to the acre; but here again the farmers differ, some using two bushels or even two and a half. Much depends on the strength and fertility of the soil, and the care with which it has been prepared, as well as the season. To these causes may be ascribed the diversity of opinion and practice. The ground can only sustain and nourish a certain quantity of plants; and if that limit be passed, the surplus will be smothered in the growth. When the seeds are sown, they are ploughed or harrowed in; ploughing in best in old ground, as it avoids the injurious effect of a beating rain, and the consequent baking of the earth. It would be also beneficial subsequently to roll the ground with a heavy roller.

After the seeds are sown, the labors of the cultivator are suspended, until the plants are ripe, and in a state to be gathered; every thing in the intermediate time being left to the operations of nature. If the season be favorable until the plants are sufficiently high to shade the grounds (which they will do in a few weeks, at six or eight inches' height,) there is strong probability of a good crop. When they attain that height, but few articles sustain the effect of bad seasons better than hemp.

It is generally ripe and ready to be gathered about the middle of August, varying according to

the time of sowing. Some sow at different periods, in order that the crop may not all ripen at the same time, and that a press of labor in rearing it may be thus avoided. The maturity of the plant is determined by the evaporation of the farina, already noticed, and the leaves of the plant exhibiting a yellowish hue: it is then generally supposed to be ripe, but it is safest to wait a few days longer. Very little attentive observation will enable any one to judge when it is fully ripe. In that respect it is a very accommodating crop, for if gathered a little too soon, the lint is not materially injured, and it will wait the leisure of the farmer some ten days or a fortnight after it is entirely ripe.

Two modes of gathering the plants are practised, one by pulling them up by the roots, an easy operation by an able-bodied man, and the other by cutting them about two inches (the nearer the better) above the surface of the ground. From a quarter to a third of an acre is the common task of an average laborer, whether the one or the other mode is practised. The objections to pulling are, that the plants with their roots remaining connected with them, are not afterwards so easily handled in the several operations which they must undergo; that all parts of the plant do not rot equally and alike, when exposed to the dew and rain: and, finally, that before you put them to the brake, when the root should be separated from the stalk, the root drags off with it some of the lint. The objection to cutting is, that you lose two or three inches of the best part of the plant nearest the root. Pulling being the most ancient method, is most generally practised. I prefer, upon the whole, cutting; and I believe the number who prefer it is yearly increasing. When pulled, it is done with the hand, which is better for the protection of an old leather glove. The laborer catches twenty or thirty plants together, with both hands, and by a sudden jerk draws them without much difficulty. The operation of cutting is performed with a knife, often made out of an old scythe, resembling a sickle, though not so long, but broader. This knife is applied much in the same way as the sickle, except that the laborer stoops more.

Whether pulled or cut, the plants are carefully laid on the ground, the evener the better, to cure; which they do in two or three days, in dry weather. A light rain falling on them whilst lying down is thought by some to be beneficial, inasmuch as the leaves, of which they should be deprived, may be easier shaken off or detached. When cured, the plants are set up in the field in which they were produced, in shocks of convenient size, the roots or but-ends resting on the ground, and the tops united above by a band made of the plants themselves. Previous to putting them up in shocks, most cultivators tie the plants in small hand bundles of such a size as that each can be conveniently held in one hand. Before the shocks are formed, the leaves of the plants should be rapidly knocked off with a rough paddle or hooked stick. Some suffer the plants to remain in these shocks until the plants are spread down to be rotted. Others, again, collect the shocks together as soon as they can command leisure, (and it is clearly the best,) and form them into stacks.

A few farmers permit these stacks to remain over a whole year, before the plants are exposed to be rotted. By remaining that period in stalks, the plants go through a sweat, or some other process, that improves very much the appearance, and, I believe, the quality of the lint, and this improvement fully compensates the loss of time in bringing it to market. The lint has a soft texture and a lively hue, resembling water-rotted hemp; and I once sold a box of it in the Baltimore market at the price of Russia hemp. In every other respect, the plants are treated as if they were not kept over a year.

The method of dew-rotting is that which is generally practised in Kentucky. The lint so spread is not so good for many purposes, and especially for rigging and ships, as when the plants have been rotted by immersion in water. or, as it is generally termed, water-rotted. The greater value, and consequently higher price of the article, prepared in the latter way, has induced more and more of our farmers every year to adopt it; and if that prejudice were subdued, which every American production unfortunately encounters when it is first introduced and comes in contact with a rival European commodity, I think it probable that in a few years we should be able to dispense altogether with foreign hemp. The obstacles which prevent the general practice of water-rotting are, the want of water at the best season for the operation, which is the month of September; a repugnance to the change of an old habit; and a persuasion, which has some foundation, that handling the plants after their submersion in water during that month is injurious to health. The first and last of these obstacles would be removed by water-rotting early in the winter, or in the spring. The only difference in the operation, performed at those seasons and in the month of September, would be, that the plants would have to remain longer in soak before they were sufficiently rotted.

The plants are usually spread down to be dew-rotted from the middle of October to the middle of December. A farmer who has a large crop on hand puts them down at different times for his convenience in handling and dressing them. Autumnal rotting is more apt to give the lint a dark and unsightly color than winter rotting. The best ground to expose the plants upon is meadow or grass land, but they are not unfrequently spread over the same field on which they grow. The length of time they ought to remain exposed depends upon the degree of moisture and the temperature of the weather that prevail. In a very wet and warm spell five or six weeks may be long enough. Whether they have been sufficiently rotted or not is determined by experiment. A handful is taken and broken by the hand or applied to the brake, when it can be easily ascertained, by the facility with which the lint can be detached from the stalk, if it be properly rotted. If the plants remain on the ground too long, the fibres lose some of their strength though a few days longer than necessary, in cold weather, will not do any injury. If they are taken up too soon, that is, before the lint can be easily separated from the woody part of the stalk, it is harsh, and the process of breaking is difficult and troublesome. Snow-rotting, that is, when the plants, being spread out, remain long enough to rot, (which however requires a greater length

of time,) bleaches the lint, improves the quality, and makes it nearly as valuable as if it had been water-rotted.

After the operation of rotting is performed, the plants are again collected together, put in shocks or stacks, or, which is still better put under a shed or some covering. When it is designed to break and dress them immediately, they are frequently set up against some neighboring fence. The best period for breaking and dressing is in the months of February and March, and the best sort of weather, frosty nights and clear thawing days. The brake cannot be used advantageously in wet or moist weather. It is almost invariably used in this state out of doors and without any cover; and to assist its operation, the laborer often makes a large fire near it, which serves the double purpose of drying the plants and warming himself. It could not be used in damp weather in a house without a kiln or some other means of drying the stalks.

The brake in general use is the same hand brake which was originally introduced and has been always employed here, resembling, though longer than the common flax brake. It is so well known as to render a particular description of it, perhaps, unnecessary. It is a rough contrivance, set upon four legs, about two and a half feet high. The brake consists of two jaws with slits on each, the lower jaw fixed and immovable, and the upper one movable, so that it may be lifted up by means of a handle inserted into a head or block at the front end of it. The lower jaw has three slats or teeth, made of tough white oak, and the upper two, arranged approaching to about two inches in front, and in such manner that the slats are about six or seven feet in length, six inches in depth, and about two inches in thickness in their lower edges; they are placed edgewise, rounded a little on their upper edges, which are sharper than those below. The laborer takes his stand by the side of the brake, and grasping in his left hand as many of the stalks as he can conveniently hold, with his right hand he seizes the handle in the head of the upper jaw, which he lifts, and throwing the handful of stalks between the jaws, repeatedly strikes them by lifting and throwing down the upper jaw. These successive strokes break the woody or reedy part of the stalks into small pieces or shoes, which fall off during the process. He assists their disengagement by striking the handful against a stake, or with a small wooden paddle, until the lint or bark is entirely clean, and completely separated from the woody particles.

After the above operation is performed, the hemp may be scutched, to soften it, and to strengthen the threads. That process however, is not thought to be profitable, and is not therefore generally performed by the grower, but is left to the manufacturer, as well as that of beating and hackling it. Scutching is done by the laborer taking in his left hand a handful of the lint, and grasping it firmly; then laying the middle of it upon a semi-circular notch of a perpendicular board of the scutching-frame, and striking with the edge of the scutch that part of the lint which hangs down on the board. After giving it repeated strokes, he shakes the handful of lint, replaces it on a notch, and continues to strike and turn all parts of it, until it is sufficiently cleansed, and the fibres appear to be even and straight.

The usual daily task of an able-bodied hand at the brake is eighty pounds weight; but there is a greater difference not only in the state of the weather and the condition of the stalks, produced by the greater or less degree in which they have been rotted, but in the dexterity with which the brake is employed. Some hands have been known to break from one hundred and fifty to two hundred pounds per day. The laborer ties up in one common bundle the work of one day, and in this state it is taken to market and sold. From what has been mentioned, it may be inferred, as the fact is that the hemp of some growers is in a much better condition than that of others. When it has been carelessly handled or not sufficiently cleansed, a deduction is made from the price by the purchaser. It is chiefly bought in our villages, and manufactured into cotton bagging, bales, and other kinds of untarred cordage. The price is not uniform. The extremes have been as low as three and as high as eight dollars for the long hundred, the customary mode of selling it. The most general price during a term of many years has been from four to five dollars. At five dollars it compensates well the labor of the grower, and is considered more profitable than any thing else the farmer has cultivated.

The quantity of net hemp produced to the acre is from six hundred to one thousand weight, varying according to the fertility and preparation of the soil and the state of the season. It is said that the quantity which any field will produce may be anticipated by the average height of the plants throughout the field. Thus if the plants will average eight feet in height, the acre will yield eight hundred weight of hemp; each foot in height corresponding to a hundred weight of the lint.

Hemp exhausts the soil slowly, if at all. An old and successful cultivator told me that he had taken thirteen or fourteen successive crops from the same field, and that the last was the best. That was, however, probably owing to a concurrence of favorable circumstances. Nothing cleanses and prepares the earth better for other crops (especially for small grain or grasses) than hemp. It eradicates all weeds, and when it is taken off, leaves the field not only clean, but smooth and even."

IMPROVED BREED OF HOGS.

From the Kentucky Farmer.

There has been much controversy in Kentucky in reference to the relative merits of the various breeds of improved hogs; and the subject has indeed engendered some of the spirit of partizanship. It is not our purpose to take a side in the controversy; being determined to deal with the utmost impartiality towards the advocates of each of the various breeds. Our object shall be, in conducting this paper to take such a course as will serve to bring out the *facts* referring to the merits of all subjects in which the farmer is interested. While we deem an honest collision of sentiment favorable to the investigation of truth; we deprecate that partizan spirit which has an exceedingly keen vision in looking at one side of a subject and is utterly blind in viewing the other. Long ago, and repeatedly since, we proposed a test by which the relative merits of the various breeds of hogs could be satisfactorily ascertained; and that was, to rear a large number of each

breed, under the usual mode of treatment which the county is compelled to adopt, noting carefully all the facts involved in the experiment. When this proposition was first made, it was objected, that the demand for blooded pigs, for breeders, was too great to allow a sufficient number of them to be devoted to the experiment. The "pig business" is indeed too profitable to be abandoned for the sake of making experiments and we have strong doubts whether any of the prominent breeders of the various vaunted breeds can ever be induced to go into such an experiment as is proposed. But the object can be effected in spite of them and without their co-operation. Many farmers have purchased blooded pigs, not for the purpose of going into the "pig business," but of improving their stock; and they will rear their progeny; not under the stuffing and gorging system, but in the usual way, and the results of such treatment will indicate the best breeds. It cannot be long till we shall have reports of practical experiments, showing the entire treatment, the ages, the amount of food consumed, the weights attained, travelling qualities, &c. &c. This is the kind of information we have sought to elicit, because we believe it the only satisfactory kind.

We have some facts, relating to various breeds, which we take the liberty of gleaning from our private correspondence, believing that the writers can have no objection to their publication. The facts are interesting in themselves and may lead to the developement of others more explicit and satisfactory.

We begin with the statement of an experiment by Mr. B. P. Gray of Woodford, made in the usual practice of rearing hogs. It will be recollected that we published an experiment (Vol. 3, p. 142,) of this gentleman upon half blood Thin rinds, highly favorable to that breed. The present experiment relates to some pigs by an Irish boar out of half blood Thin rind sows, and a comparison between them and some pigs of scrub breed. The result will astound two classes of men,—those who deny the great superiority of blood and those who affect to ridicule the Irish and Thin rind hogs, for neither of them are now considered *the* "fashionable" breed. We have the notes before us furnished by Mr. Gray and no one who knows him will doubt the correctness of his statements. And it is proper to say that he is not a "pig dealer;" his hogs were reared and killed for the use of his own family; and no one must regard this notice either as a "puff or an advertisement in disguise."

He killed 46 hogs last fall. Of these, 22 were scrubs, pigged in October, 1839; the residue were out of half blood Thin rind sows by an Irish boar, 22 of them pigged in January 1840, and the other two pigged in October 1839 about the time of the scrubs. The scrub pigs were well wintered in the usual way; and as soon as the blooded pigs were weaned, the whole 46 were turned together and well treated. The clover was good but the rye was very indifferent [nobody grew good rye last summer.] The whole were put up together in a pen on the 15th Sept. 1840, to be fattened on corn. Now mark the result.

The 22 blooded pigs, pigged in January 1840, slaughtered November 19, ten months old, weighed neat, 5120 pounds, being an average of 232 pounds each, neat.

The 22 scrubs, pigged in October 1839, slaughtered December 17, near a month later, when fourteen months old, weighed neat, 3930 pounds, being an average of 178 pounds each, neat.

So the scrubs, four months older, and fed on corn near a month longer, averaged each 54 pounds less than the average of the blooded pigs.

The two blooded pigs, pigged about the same time of the scrubs, and killed a month sooner, weighed respectively 306 and 298 pounds, neat.

The heaviest blooded pig weighed, neat, 296 pounds, the lightest, 193; the heaviest scrub, 206, lightest, 104.

These facts need no comment; they speak for themselves and every farmer can make his calculations as to the relative value of blooded and common pigs. The scrub pigs were considered of good stock; and we presume the weights they attained will prove them equal to the average of common hogs.

Mr. Joseph Reed, of Montgomery county, had 6 pigs, pigged about the first of April, by Dr. Combs' Berkshire boar, out of a common sow, which averaged 175 lbs. neat, killed about the middle of November, when seven and a half months old--ordinary treatment.

We will now quote from a letter by Dr. Martin, dated Dec. 7, 1840. He is a distinguished breeder of cattle and various breeds of hogs, but is understood to be an advocate of the Woburn hogs:

"Now for avoirdupois. I sold to Henry Savory, five hogs of Woburn blood, that were two and three years old—three year olds had been used as boars. No. 1, weighed 640 lbs; No. 2, 630; No. 3, 660; No. 4, 748; No. 5, 824. 7½ off each for weight of breeching—I have sent this to the Kentucky Farmer.

"I had some pigs, pigged 23d of last December; they were kept with their mother, after some cattle, until April, when they were turned on grass, and 1st July upon rye that was less than two bushels to the acre, (what was cut and I cut the best of it,) after which about a hundred were turned upon a stubblefield and they had access to an apple-orchard of one hundred trees, winter fruit, very little down until a storm 3d October. They stayed here until put up to fatten and were killed 17th November and weighed neat meat 261. These were the refuse of the Woburns—I don't know what the best would have done. I killed a pig, a little older than Gov. Wickliffe's boar which was pigged 14th February, with same kind of treatment as the last, that weighed 250 lbs. neat. I killed a refuse pig, much the least in the litter, pigged 14th May, half white Berkshire and half Woburn—killed Nov. 17, that weighed 110 neat meat. The best of this litter, I think, (a mere matter of opinion,) would have weighed 200 lbs. each."

The statement in reference to the big hogs, so far as relates to the expense of their keep, the quantity of food consumed, and the length of time they were fully fed, is about as definite and satisfactory as the phrase—"big as a piece of chalk." And the Doctor had been more satisfactory, in reference to the pigs, had he stated the length of time they were corn fed.

Our next quotation is from a letter by A. B. Allen, Esq., of Buffalo, New York, a distinguished breeder and advocate of Berkshire hogs, under date, Columbus, Ohio, December 9, 1840; and we are glad to find one so eminent, concurring in our views as to the proper mode of ascertaining the real merits of the various breeds:

"But to return to Berkshires. I know that the Woburns can beat the present Berkshires* in weight at same age, but that is nothing. The only fair and proper test would be such as you propose, 50 or 100 head of each grown up and fatted in the common farming way of the country, an accurate account kept of their food, and then see which has given the most and best pork for it; nothing less than this would be satisfactory. But can Dr. Martin show a gain of upwards of three months, of three pounds per day, as the Brentnalls made a Berkshire barrow do last winter? Vide their statement in Mareh or April number of Cultivator. I have just made a most superb importation from England and have every satisfactory evidence from the persons who bred them, that the families from which they are derived will galn 1¾ to 2 lb. per day, made barrows and shoved in their feed, for the first year of their lives. A pair of pigs, sent with one of the sows, has gained since littered in April 1¾ lbs. per day each up to the present time, and one of the boars actually weighed on the scales, on arrival, 520 lbs. at 18 months old, though thin in flesh. My brother will make a statement of them either in his own or my name, for December or January number of the Cultivator. They had not arrived when I left; but he says they show great vigor and constitution; and, notwithstanding their size, are equal in fineness of point to my very best shaker and other stock. The oldest boar, he adds, is superior to any thing he ever saw, not excepting the last sent out by Hawes to Lossing and the Brentnalls—their color and characteristics same as Hawes' importations. The stock of my Prince Regent, imported last fall, has proved very fine and has taken premiums wherever exhibited, but it is hardly large enough to suit Kentucky. In this valley, [the Scioto] and in New York, 'tis much admired. Breeders here tell me they don't want a *bigger hog than* 300 *lbs.* at 18 months; and a few large Berkshires I brought down won't sell at all among them, while the medium size go rapidly. As to their driving, I know the longest legged ones cant be beaten in *mud* or any where else. I give you an extract of a letter just received from John Mahard, jr., of Cincinnati, one of the largest pork packers there. He wrote me unsolicited in the way of business.

'We have just got through cutting and packing 1280 hogs, for J. B. Kenney, esq. and others, who drove them from near Georgetown, Ky., a distance of about 80 to 100 miles and in the drove they had five or six half blood Berkshires and they stated that they stood the journey *better than any other hogs in the drove*; and although several of the common hogs gave out and had to be left behind, every one of the half Berkshires came safe through to market."

To be sure this is but a small and partial experiment, but it goes to prove my assertions regarding their driving qualities; and as Mr. Kenney is one of your neighbors, I suggest your obtaining the statement from him and publishing it."

We shall conclude now, by an extract from a letter written by a gentleman of Madison (that great hog raising county) to a correspondent in Clarke, who transcribed it in a private letter under date December 23, but with no view of its publication. As to the conclusions of the writer favorable to one breed and unfavorable to others, they would carry more weight, had he stated the facts and grounds on which they are based. But the writer appears to have exerted an active spirit of investigation, and he, too, coincides with us, that the gorging system does not furnish the true test. We would thank him for his facts.

"Mr. —— and myself endeavored at the Winchester fair to determine which, among the several rival breeds of hogs, is the best. We carefully examined the specimens of each that were exhibited there, and concluded that the very best of each, reared in the best manner, is not a fair test of their relative value or their merits; because we sometimes see individual animals possessing that conformation which experience has proved constitutes them the most valuable of their species, which has been the result of accident aided by extraordinary care and judgment in rearing, and is not a characteristic of their race. It is sometimes the case too, that this form is imparted by a single cross and never appears in their progeny. It is a fact also, that one particular breed of fine animals, crossed upon an inferior race, gives to the produce but little if any of its own merits; whilst a different breed, crossed upon an inferior race, will make a great improvement. We therefore determined that the best mode of settling this matter would be to examine those different breeds in *general* and not in particular individuals: too see them under indifferent as well as good treatment, and inspect the cross of each upon our common stock kept as stock hogs generally are. This course of examination we commenced at your house. We have since looked at other herds. We have seen the cross of the Woburn, the Berkshire and the Grazier, upon the various breeds of scrub hogs, and after a tedious and rigid investigation of the claims of all of them, through their crosses and in themselves, for all the purposes for which they are designed, we unhesitatingly pronounce the Woburn the best hog. We have seen them crossed in every way and the result has been invariably, an obvious and decided improvement. I could give you some facts in relation to other favorite breeds, crossed upon the scrubs, of which perhaps you are not apprised, that detract much from their merit and high standing in my esteem; but as you are the owner of all those different breeds, I will say nothing here upon that subject."

This is strong language, and we repeat that the writer should substantiate his opinions by the facts.

We have now had the various breeds long enough to judge of them by their real merits; and we repeat our call for facts, ascertained in practice. We mean to show fair play and do full justice to all; and if the facts regarding the merits and relative value of each of the vaunted breeds, be not made known, it shall be the fault of the breeders themselves. Give us, then, *facts*, proving the superiority of your various breeds. State your treatment fully and fairly and then give us your arguments in avoirdupois. No humbugging puffs will be admitted; we have had, in all conscience, too much of them already. Intelligible, practical facts are now due; let's have them.

*But we shall anon with others I am going to import

THE FOURTH AGRICULTURAL MEETING.—LIVE STOCK.

From the Boston Courier.

The fourth agricultural meeting was held at the State House, on the evening of the 4th inst., Hon. D. P. King in the chair. The subject of discussion was live stock.

Mr. Colman introduced the subject by a succinct account of the various breeds which had been and were to be found in the country; enumerating and describing the native stock, the Devon, the Hereford, the Yorkshire, the Holderness, the Alderney, the improved Durham Short Horn, the Ayrshire, and lastly a new race, which, by the skill and perseverance of a gentleman from whom the meeting would hear presently, had been formed in our vicinity; and in some respects was not surpassed by any breed known among us, or in the world, particularly for the richness of their milk and the amount of butter obtained from it.

He proceeded to speak of some remarkable animals of our native breed which had fallen under his observation. The Oakes cow, which in one instance made 19¼ lbs. butter per week; an average of more than 16 lbs. per week for three months in succession, and 484 lbs. from 1st May to 30th December in one year, besides suckling a calf for six weeks; of the Nourse cow, formerly owned by Col. Pickering, from which more than 14 lbs. per week were obtained for four successive months; of a cow at Stockbridge, which, in three successive years, made 900 lbs. butter; of a cow owned in Shelburn, which produced 335 lbs. butter in one year; and a cow in North-Adams, which produced 425 lbs. butter in one year.

These were extraordinary examples. Others might be found. But they are individual instances; and among our native stock we have no established race of animals, whose excellent qualities may be pronounced fixed by always breeding from the very best, unless it be in the case already referred to.

In England, great attention for more than half a century had been paid to this subject, and by the highest skill and the most determined perseverance, valuable races had been formed. Bakewell may be said to have begun these improvements. The Messrs. Collins pursued it with distinguished ability and liberality. The country patronized and encouraged such improvements by the most liberal prices paid for the improved stock; 1000 guineas having been given at a public sale for the Messrs. Collins's celebrated bull Comet; and 400 and 600 guineas having been sometimes given for a cow, and more than 100 guineas for a calf.

Mr. Colman proceeded to say that no permanent improvement can be made but by intelligence of observation and long continued perseverance in selecting the best from the best, and breeding animals with a special reference to the most desirable qualities. We have great advantages in this country, inasmuch as we can at once avail ourselves of the improvements made in Great Britain; and if the introduction of their stock would be an advantage, the best animals could be obtained at once.

Mr. Colman spoke of the various importations which had been made by different public-spirited individuals, many of which he had had the pleasure of seeing, especially some of the splendid importations made by spirited citizens from Ohio, the beauty of which animals, their admirable symmetry, and the perfection to which art, guided by the most philosophical principles, had carried these improvements, excited the highest admiration. He then proceeded to speak of the distinguished liberality of a gentleman in the vicinity of Boston, who, with a view to obtain the best milking stock known abroad, had imported largely of the Ayrshire, a stock deemed abroad the best stock known for dairy purposes. This same gentleman, with his customary public spirit, had given away many of these animals with a view to the improvement of the stock and had in the most liberal manner rendered these improvements accessible to any farmers who chose to avail themselves of them. The Massachusetts Agricultural Society, with their usual liberality, had done the same.

Mr. Colman having gone to some extent into the characteristics of the different breeds, from personal observation, inquiry, and experiment, concluded by saying that a gentleman present by his invitation, who was well skilled in the subject now under discusssion, and was himself the founder of the race of animals to which he had referred, would detail fully his progress and success in forming this new race of animals; and would give them, before the meeting closed, ocular demonstration of the superlative quality of their cream.

Col. Samuel Jaques of Charlestown, the well known superintendent of the Stock Farm at Ten Hills, then addressed the meeting at some length, but with much good sense, and excellent humor.

He had long personal experience in this case. He deemed the improvement of the live stock of our country matter of the highest moment to the agricultural and the whole community. There were several varieties of animals, as already referred to. He was particularly desirous of finding a race exactly suited to our soil and climate.

We may, perhaps, form a breed better adapted to our purposes than any foreign breed now known. But as any great improvement could not be carried through and established under half a century, it would be wise to avail ourselves of what had been done abroad, as far as it might meet our purposes.

In 1819, he gave $600 for a bull calf, in order to make a cross with some of our best cows.—Much skill is requisite in selecting the cow, as well as the bull; but out of a thousand brought to him, there was not one, which he found suitable.

Ralph Haskins of Dorchester had obtained, from a farmer's yard in Groton, a cow distinguished for the extraordinary richness of her milk. She was of a deep red; resembling, in some respects, the Devon race; but not known to have any foreign blood in her. She had a capacious body, and fine silky feel. This cow was crossed with Cœlebs, an imported bull, of the Durham blood. Cœlebs had produced some remarkable milkers. It was in this way, Mr. Jaques thought, best to lay the foundation of an improved stock. His object was to obtain a stock eminent for their dairy properties.

Having succeeded, acccording to his expecta-

tions, in producing a race distinguished for the richness of their milk, he chose to denominate it the Creampot breed; and he had now proceeded as far as the fifth generation, and had already sixty animals, more or less tinctured with this blood. He went, as he said, for blood, and whatever surprise it might excite, he was confident in saying, that he would breed animals to order. He would proceed upon the same principle as that on which the painter applies his lamp-black to his white lead; and in respect to cattle, as rumps of beef sold in market for a shilling per pound, and shins for three cents, he would seek to make the rumps large, and the shins small.

Farmers admitted this principle of breeding, in respect to sheep; so they would cross their Merino with their native, until, by successive steps, they improved their wool from one half to three quarters and seven eighths grade. All farmers would agree to make wool to order, if you would promise them one dollar per pound. It is the same with cattle. Stock on the Exchange may be changed and transferred at once. Live stock is not disposed of so easily. It requires four years to produce a calf, and eight years a second, that is, before you can determine their properties.

The race-horse is not popular among us. We want a horse that will do all kinds of work. This was obtained by a cross of the full-blood race-horse with the thorough-bred Normandy. This colt was given, by a gentleman in Canada, to a Vermont farmer by the name of Morgan. This was the foundation of a distinguished breed. This horse would run eighty rods in fifteen seconds. He could pick out a Morgan horse, among a hundred. The combination of two of the best bloods, in this case, gave a general character. This horse is of eminent endurance, docile, obedient, rugged; and is a full hand for the best whip.

Cœlebs had no pedigree, but there was good reason to believe that he was a direct descendant from the stock of Messrs. Collins. He was confident that by a cross of Cœlebs with a suitable native cow, he should succeed in his object of obtaining rich milk and excellent butter-properties. He had now in milk the third generation, and four quarts of her milk had made one pound of butter. The milk contains so little that cannot be made into butter, that in his belief one hundred pounds of her cream would produce ninety-five pounds of butter.

He had now twenty-eight cows and heifers of this stock; and at his pleasure he could breed his stock with orange color or yellow round the eye, of a mahogany color, white bags and black teats, as might be desired. This may seem incredible, but not more incredible than the present rate of travelling on railroads would have seemed to an individual who lived a hundred years ago.

Most cows which are used by the farmers for breeders, have no more claims for that object than a skunk would have. He prefers, in selecting a suitable breeder, to trust his hands than his eyes. He wants to have a silky, elastic feel. The difference in the feel of animals, that is, of their skin, is like the difference between a two dollar negro-cloth and a fourteen dollar broadcloth. The difference in fatting animals arises from the thriftiness of their constitutions, so that while upon half a bushel of meal per day one ox would yield only seventy-five pounds of rough tallow, another, of a better kind, would produce a hundred and seventy-five pounds. He was told by one visiter that he had oiled his stock; and on a visit to Mr. Phinney's farm in Lexington, a farmer who had been at his place found himself able, among half a dozen calves, to select two of the Cream-pot breed, simply by the feel.

The breeding of swine had been carried to great perfection among us. Improvements in neat stock few would undertake. Sheep are very profitable stock, with an amount adapted to the size of the farm. The Merino and Saxony are deemed too tender for our climate, and produce mutton of small size for the market. The Saxony wool is too fine for general use. He had had the Leicester, the Lincolnshire, the new Leicester, the Tunisian sheep, and the South-Down. For profit, he upon the whole decidedly preferred the South-Down. They were quiet, broad and flat in the back, full in the twist, round in the thigh, and presented a fine leg of mutton. The difference between a South-Down leg of mutton, and that of a common sheep, was the difference between the thigh of a goose and that of a dunghill fowl. Sheep give a valuable yearly return, but much depends on the kind.

The Berkshire and the Mackay breed of swine do not cost so much in the keeping as the common breeds, but the return is much greater. He insists much upon the breed. You cannot make a race-horse out of a Canadian runt, if you should have a groom at each leg; nor by any art bring him to run four miles at a heat, and repeat. You might as well attempt to produce upon a scrub-pear the fruit of the St. Michael's. We cannot do as we will, in many cases, because we have not the means. Most of our farmers have the talent, but few have the capital wherewith to make improvements. In England, capital is applied to agricultural improvements with the utmost readiness, and with a success proportionate to this liberality. Our own agriculture has received a generous impulse, and every friend to his country must wish it increased success.

Mr. Putnam of Danvers then stated that he had seen a heifer of the Cream-pot breed, in Southboro,' which he recognized by her silky feel, and her milking properties promised well. She had been injured in two teats, but the milk taken from those two in one week produced seven and three-fourths pounds of butter. The calf took the two uninjured teats. This was in October.

Mr. Sheldon of Wilmington was then kind enough to favor the meeting with some valuable remarks on the subject of working oxen. [The authority of this gentleman is undoubted, from his long experience. He took by contract the reduction of Pemberton Hill, in Boston, and had at one time 118 yoke of oxen at work there.]

The object of his remarks was to assist the farmer in making a suitable selection of oxen for work. If you desire to have those which would be free to travel and to pull, take those with a long and lean face. Those with short faces will start quick but soon forget the whip. He chooses oxen whose heads are long; whose eyes are sharp, but at the same time pleasant. He thinks that we cannot rely upon black-eyed oxen. (Lord Byron says you cannot rely upon gray-eyed men or women.—Reporter.) They are not docile. He

would rely as much upon the eye of an ox as upon that of a man, in making his preferences. He prefers oxen with full bosoms, as indicative of strength. In choosing cattle to travel well, he would have their toes straight forward. If they are inclined outward in travelling, the strain will come upon the inner claw, and they will become foot-sore. If the toe is turned out, the leg will be crooked, and turned in. A crooked stick will not bear a weight so well as a straight one. He would avoid for travellers, oxen with long, pointed feet, and especially an ox whose ankle is larger than his foot. He would have the back straight; if a little concave, not objectionable, but by no means choose an ox with an arched back. For the endurance of hardship, he would have their ribs rounded and projecting; and not so set in, that when they run among the trees they would strike their hips. He much prefers the early trained cattle to those which are late trained. This training cannot be begun too soon, only proportioning the labor put upon them to their strength. The Maine oxen formerly had the preference over all others, because they were put to the yoke when calves. Powers of labor or endurance depend greatly upon exercise and exposure. A tree, standing alone in a pasture, where it is beat about by winds and storms, will be much more firmly rooted than one grown in a forest, where it is sheltered and protected by others. Take twin brothers—bring up one behind the counter of an English goods store, and put the other into a blacksmith's shop, and the superiority of muscular energy will not remain doubtful. Very much depends on the manner of using oxen. They may suffer much from severe hardships, like a tree tried by a hurricane.

He proceeded by remarking on the general opinion, in which he did not concur, that a high-lifed horse could not be properly employed before oxen. He would never, in breaking a horse to this labor, tackle him in the afternoon. He would spend a day in coaxing him, and never allow him, under any circumstances, to be struck. When he began with tackling a colt, he would have a horse in sight, towards whom he might be directed. He would put him before oxen, but never with a load that it would be difficult to draw; and in breaking a colt, he would never try to drive him away from home.

Mr. Sheldon has since informed us, that his oxen at work in Boston, averaged nineteen miles travel per day; and that he wished to have added some remarks on the shoeing of oxen, in which he thinks great errors are committed. For travelling on the road, the shoe of an ox is almost always made too short. It should completely cover the bottom of the heel.

Mr. Jones of West-Tisbury, being called on by the chair, joined in the discussion.

He deemed an agricultural life as highly pleasant and respectable. The raising of stock, as a branch of husbandry, had many attractions. He had resided in the best agricultural districts of England three years, and was familiar with their operations. He had attended many of their cattle shows. Much had been done in this country, but from any thing accomplished here, little idea could be formed of what had been effected there. England seems to have carried the art of breeding to a high degree of perfection. He considered that greater improvements had been made in sheep than in cattle. Those of us who have not seen them, can form a very imperfect idea of the English flocks. He had seen large flocks of the Leicesters and the Teeswaters, not one of which would weigh less than 150 pounds. In some districts, the long-woolled sheep are preferred. On the Downs, the South Downs. He had seen Mr. Coke's flock, which at that time consisted of 5000. In some districts, the sheep are all bred with yellow faces; in others, with black faces, which illustrates, the principles of breeding laid down by Mr. Jaques.

On our scanty soils the South Downs would undoubtedly pay the most profit. We cannot grow the long wools to advantage. That had better be left to Pennsylvania and Delaware. We demand much mutton for market. On this account the South Downs are to be preferred for us. The fine wools may be advantageously cultivated where mutton is not in so much demand.

We have now very good stocks for animals if we would be careful in the selection. The short horns may answer for many districts in our country; but he believed the middling sized red cattle were to be preferred for us. Our agriculture is not pursued upon a sufficiently liberal scale. We do not employ sufficient capital. He expressed his strong regret that any intention should have been manifested for the discontinuance of the Agricultural Survey. He thought it had been eminently serviceable, and great benefits were to be expected from it. No measure could be adopted more conducive to the improvement and welfare of our agriculture. The agricultural Surveys in England had been worth millions to that country; and he thought it a niggardly policy and unworthy of Massachusetts to hesitate about a few thousands for the advancement of this great and common interest. It was matter of great regret to him that any thoughts should be entertained of discontinuing the survey, which had already received the most favorable notices abroad. The English Agriculture was more improved than any other, and the great impulse to improvement was given by the eminent labors of Arthur Young in his agricultural tours. He hoped that, in addition to the completion of the Agricultural Survey, the State, in the course of five years would have established a Board of Agriculture.

Mr. Putnam made some inquiries of Mr. Jaques on the point whether butter is as good obtained from large quantities as small quantities of milk, as on his father's farm, in the care of 2 cows, one giving 47 or 48 pounds milk per day, and one 35 pounds milk per day in June, and making each about thirteen pounds of butter per week, the quality of the butter from the cow giving the largest quantity was superior to that from the other.

Mr. Jaques was unable to give a definite answer in *this particular* case. He spoke again of the importance of blood and preserving races pure. Our cattle had been much corrupted by intermixtures. With a view to test his principles he had entered largely into the breeding of rabbits; and it had required the ninth generation and four hundred rabbits to reach the point at which he aimed. Excellent stock were often exhibited at Brighton, but a valuable race could not be obtained without much pains. It would require half a century in some cases to transfer the vigor of constitution of

one race to another. The milk of different cows differed essentially in its richness. A cow exhibited at Brighton, by Hon. William Gray, some years since, gave thirty quarts of milk at a milking, but the milk produced no cream.

Mr. Buckminster, (always strongly inclined to conservatism,) deemed the subject of discussion highly important, and had listened with much approbation to the remarks of Mr. Jaques. They agreed with his own opinions. So long as the imported foreign stock produced nothing better than we already had, he saw no use in importing. He thought we could not improve our stock without stock farms. Few persons are capable of judging accurately. Any man could see the difference between a large and a small hog, but other points were to be determined. He approves highly of Mr. Shelden's notions of managing stock. He would banish a whip from the farm, and he would have cattle and horses broken and managed with all the gentleness possible.

The time of adjournment having nearly arrived, the meeting were gratified with Mr. Jaques's exhibition of a pot of cream from his celebrated stock. It was of most extraordinary consistency, and was converted into butter by churning in a bowl with a spoon, in the presence of the meeting, in less than one minute, thus completely verifying the declarations which he had made.

The meeting was exceedingly well attended. The interest in these discussions increases, and with that a general and strong conviction of their utility.

H. C.

BURN YOUR COTTON STALKS.

From the Edgefield Advertiser.

Mr. Editor—I am one of those who believe that it is the indispensable duty of every man, especially those who call themselves planters, to communicate to the public information, no matter how trivial, that will in the smallest degree promote the interest of the farmers generally. There is no planter in the state, I venture to say, who has paid that attention to his farm that is obligatory upon him, but can give valuable information upon almost every subject connected with the cultivation of the soil. In view of the above obligation, I have concluded to call the attention of farmers to one fact, which perhaps will be more beneficial in cultivating a crop, than one would anticipate, from so small a matter as burning *cotton stalks*. The hard times, Mr. Editor, have caused me to reflect very seriously, upon the failure of another cotton crop. Should that be the case, ruin must fall upon every class of the community. Well, in order to enable me the more perfectly to succeed in a crop of cotton, I set about to examine every old stump, tree, &c., in my cotton field, to find out, if possible, what had become of the worm or caterpillar that was so very destructive to our cotton the last year. I proceeded to examine one by one very closely, but made no discovery, in passing through the field with my knife in hand, (as usual with farmers,) whittling every little splinter, until I exhausted every thing in the shape of wood. I then fell upon the cotton stalks, where, to my surprise, the first part of a stalk I cut up, I found six caterpillars snugly housed in the pith of the stalk. This discovery led me to an examination of at least some fifty or more stalks, when to my astonishment I found the worm, some eight or ten in every stalk, and nearly all alive. My plan is, to destroy these *lovers of cotton* immediately, and the only effectual mode that I know of, is to *burn the stalks*. You should set about it immediately, say the first rain, pulling up your stalks to be burnt, before the caterpillar should eat itself out, in the shape of a butterfly perhaps, or some other insect, ready to deposite its eggs as soon as your cotton should begin to form squares or balls. By adopting the above plan, thousands and tens of thousands may be destroyed, which will remove entirely, in my opinion, the greatest difficulty in making a crop of cotton. But, perhaps, some farmers may conclude, that as planters generally plant corn after cotton, it will make no material difference as to burning the stalks. But stop; let me ask you if you are certain that the chinch bug is not a production of this very caterpillar; and besides that, many farmers, notwithstanding they adopt the rotation plan of farming, are necessarily compelled to plant some cotton in the same field twice, and perhaps thrice in succession? You will excuse the dress, Mr. Editor, in which this article appears, as my object is simply to elicit a degree of attention to this matter, and to draw forth from those more experienced than myself, information which will elevate the science of agriculture to a station which it deserves.

A Young Planter.

FRUIT TREES.

From the Farmers' Cabinet.

The propagation and cultivation of fruit trees is a most pleasant and agreeable occupation for the sons and daughters of farmers; and those who have been educated in industrious habits, and those into whose minds sound moral principles have been instilled, are invariably fond of it. Every family, who occupy a lot or a farm, should annually devote a small portion of time and attention to this interesting and profitable department of rural occupation; for, we are all fond of good apples, pears, peaches, plums, quinces, and cherries, and all should lend their aid in their production; but never plant inferior kinds of fruit-trees: the same expense, time, care, and room are required as for the finest varieties, which are tenfold more valuable.

The roots of trees being designed not only to sustain them in a proper position, but to furnish them with nutriment, care should be taken, in planting, to loosen the earth for a considerable distance around them. Those who try how *small* a hole will accommodate the roots of a tree, miss their aim, for experiment has shown, that a tree planted in a hole three feet in diameter, will grow as much in five years, as one planted in a small hole will in ten; and the reason is obvious, for in the one case the fibres of the roots can extend and collect food without obstruction, while in the other the supply is very limited, or cut off.

Miller says, "the roots of trees are often buried too deep in the ground, which, in a cold or moist soil, is one of the greatest disadvantages that can attend fruit trees; for the sap in the branches, being by the warmth of the air put strongly into

motion early in the spring, is exhausted in nourishing the blossoms, and a part of it is perspired through the wood branches so that its strength is lost, before the warmth can reach the roots, to put them into an equal motion in search of fresh nourishment, to supply the expenses of the branches, for want of which the blossoms fall off and decay."

After the best kinds of trees have been procured, and skilfully and properly planted, great care should be taken to protect them from the depredations of cattle, and they should be staked, to keep them in an upright position, for there is no way in which the indolence and want of taste of a farmer is more prominently and permanently exhibited, than in the *inclined* position of his fruit trees. What think you, neighbour, of a man who has suffered a fine apple or pear tree to grow at an angle of forty-five degrees, when, if it had claimed attention, at the proper time, five minutes' work would have given it perpendicularity, and preserved its beauty; and it would then have occupied much less space.

On every farm, a small space should be allotted for the purpose of raising stocks of the different kinds of fruit trees, so that buds or grafts could be inserted at the proper seasons of performing these operations, and in this way a perpetual succession of the finest trees would be obtained. The nursery for this purpose should be kept entirely free from weeds, otherwise all will be hopeless, for weeds have been proven, by several of my lazy acquaintance, to grow much faster than young fruit trees raised from the seed. The quince is among the most profitable of our fruits, always finding a ready market at a generous price, and yet there is but little attention given to its cultivation: it succeeds best in a moist soil, and will grow readily from slips inserted in the ground, early in the spring. The *young* trees produce the finest, fairest fruit; there should, therefore, be a succession kept up, as they do not do well at a greater age than ten or twelve years. It is hoped that the approaching spring will not be permitted to pass by without a large addition being made to the number of quince trees in our country. Those who are too remote from market to profit by the sale of them in a green state, will find their interest promoted by drying them, when they will sell for a higher price than the best dried peaches.

Those who plant young orchards would do well to consider maturely what description of cultivated crops would be most beneficial to the trees, and particularly to avoid such as are known to be injurious. What would be the effect of a luxuriant crop of wheat or rye, is well known. The trees are stunted and injured in their growth, or they are smothered and killed outright. Will a wise man sow a young orchard with rye? I say no, never.

AGRICOLA.

GOOD WORK.

From the Agriculturist.

From a statement left at this office by Dr. John Waters, of Nashville, we learn that fifty-five of his hands, on his plantation in Arkansas, picked in the latter part of the month of December 34,615 lbs. of cotton in one week. The week following the success was as good, till the snow prevented the progress.

[This was on an average of 629 lbs. per week, or 115 lbs. per day, for each hand. Good winter work!—ED. F. R.]

TO PREVENT RATS FROM CUTTING HOLES THROUGH FLOORS AMD DOORS.

A correspondent in the New England Farmer says, "hot and strong tobacco juice poured on the places where rats are at work, will stop their depredations.

AGRICULTURAL SOCIETY.

From the Cheraw Gazette.

The anniversary meeting of the Pee Dee Agricultural Society will be held in the Town Hall at Cheraw, on Monday the 22nd inst. at 10 o'clock A. M. At 12 o'clock the meeting will adjourn to the Female Academy, where the anniversary oration will be delivered, after which the following premiums will be awarded.

For the greatest production of cotton, on three acres of up-land, the product to be not less than 12,00 lbs. a silver cup of the value of $30,00

For the greatest production of cotton on three acres of low grounds, the product to be not less than 18,00 lbs. per acre, a silver cup of the value of $30,00

For the greatest production of corn on three acres of upland, the product to be not less than 40 bushels per acre, a silver cup of the value of $30,00

For the greatest production of corn on three acres of low grounds the product to be not less than sixty bushels per acre a silver cup of the value of $30,00

For the greatest production of wheat on one acre, the product to be not less than twenty-five bushels, a silver cup of the value of $10,00

For the greatest production of turnips on half an acre the product to be not less than 400 bushels per acre, a silver cup of the value of $10,00

For the greatest production of sweet potatoes, on one acre, the product to be not less than 300 bushels per acre a silver cup of the value of $10,00

For the experiment best calculated to test the profits of silk culture, the product to be not less than 30 lbs. of reeled silk, a silver cup of the value of $10,00

For the greatest production of carrots on the fourth of an acre, the product to be not less than 400 bushels per acre, a silver cup of the value of $5,00

For the greatest production of sugar beets on the fourth of an acre, the product to be not less than 400 bushels per acre $5,00

J. W. BLAKENEY.
Secretary.

Cheraw, February 6th, 1841.

ECONOMY IN CANDLES.

If you are without a rushlight, and would burn a candle all night, unless you use the following precaution, it is ten to one an ordinary candle will gutter away in an hour or two, sometimes to the endangering the safety of the house. This may be avoided by placing as much common salt, finely powdered, as will reach from the tallow to the bottom of the black part of the wick of a partly burnt candle, when, if the same be lit, it will burn very slowly, yielding sufficient light for a bedchamber; the salt will gradually sink as the tallow is consumed, the melted tallow being drawn through the salt, and consumed in the wick.—*Economist.*

A CHEMICAL AND GEOLOGICAL ACCOUNT OF THE SHOCCO SPRINGS.

For the Farmers' Register.

The following account of a spring, once in high repute and still the favorite resort of the *elite* of North Carolina, will, it is presumed, possess sufficient interest to justify its publication. This spring is situated in Warren county, North Carolina, and is the source of one of the minor tributaries of Tar River. It rises in a talco-micaceous slate, belonging to a class of rocks generally considered *primary*, and hence referred to an *igneous* origin. It is however contended, by a modern school of geologists, that this class of formations was originally deposited from water, and subsequently altered by heat, they are hence called *metamorphic* rocks. Of the truth of this theory, triumphant proof is afforded by the band of rocks in which this spring originates, as the alteration may be traced by slight gradations, from a condition in which the rocks retain unequivocal proofs of their *aqueous* origin, to one in which these characters have been entirely effaced and destroyed by igneous action, and so much disguised by it, and made so intimately to resemble rocks of igneous origin, that they would be unhesitatingly referred to this class of formations, were it not possible to trace their history by the characters, above mentioned. Additional confirmation of the oceanic origin of these rocks is afforded by the saline ingredients of this spring—ingredients of course derived from saline impregnation in the rocks, which could alone have derived them from the ocean, the only known source of them. I believe this is the first published account of a spring of this composition rising in rocks of this character. Similar ingredients are common in springs rising in formations known to be of oceanic origin. The Bath water, quoted below, contains similar ingredients; but this water rises in a formation abounding in marine remains, which sufficiently attest its marine origin. The Shocco spring, belongs to the class of *sulphuretted* waters, as, in addition to the solid ingredients mentioned below, it contains *sulphuretted hydrogen;* which, though not evolved in sufficient quantity to be perceptible to the eye, is evident, both to the taste and smell, and was proved to be present by chemical tests. From the want of the requisite apparatus at the springs, the amount of sulphuretted hydrogen could not be ascertained, and owing to its gaseous nature could not be preserved for analysis elsewhere. The spring is generally free from deposite of every kind; in one instance alone, was a small deposite of the white hydrate of sulphur detected, possessing the usual singular arborescent form, which, it is said by Professor Daubeny of Oxford, is caused by its being deposited upon a peculiar vegetable fungiferous substance, to which he gives the name of *glairine.*

Shocco.

1 gallon of water contains of

Muriate of soda	7.234	grs.
Sulphate of soda	1.041	"
Sulphate of lime	51.370	"
Carbonate of lime*	8.555	"
Muriate of alumina a trace.		
Phosphate of alumina a trace.		
†Total,	68.200	"

Temp. Sept. 6th, 1840. 59 degrees.

Bath.

1 pint of water contains of

Carbonate of lime	0.8	grs.
Sulphate of soda	1.4	"
Sulphate of lime	9.3	"
Muriate of soda	3.4	"
Silica	0.2	"
Oxide of iron a trace.		
Total,	15.1	"

To show the close resemblance in composition of this spring to the Bath water, (England,) so celebrated for its medicinal virtues, the analysis of the latter by the celebrated Phillips, is annexed. The forthcoming work of my friend, Professor Wm B. Rogers, on the Virginia Springs, will afford a comparison with the springs of that state. Experience has proved this water to be a stimulant tonic. Aperient, cathartic, diuretic, diaphoretic, emmenagogue and alterative. Most of these properties would naturally be expected from the respective medical qualities of the different ingredients contained in the water. Some of the enumerated properties cannot be thus accounted for. This, however, is by no means rare, as mineral waters frequently possess medical properties which cannot be referred to either of the contained ingredients, and which do not belong to the artificial mixture of them; although the imitation may accurately represent the natural compound, both in the nature and relative amount of the ingredients. It is this which renders natural waters so much more efficacious than the artificial imitations of them. To be convinced of the medical value of this water it is only necessary to remember how large a class of chronic diseases originates in the derangement of those organs, whose functions would be controlled and regulated by an agent possessed of the above-mentioned properties. The curative virtues of this water will, perhaps, be most happily exercised upon those inhabitants of malarial districts, suffering from a derangement of the alvial secretions, functional affections of the alimentary canal, deranged depu-

* The stratum from which the spring issues was found to contain a very appreciable amount of lime in the form of a silicate. The existence of lime in the soil may hence be inferred.

† When the water was taken for analysis, the spring was swollen by rain—hence the amount of solid matter mentioned in the analysis as corresponding to 1 gallon, is probably *less* than the *average* quantity.

‡ Derived from the sulphurated hydrogen.

ration of the skin, and the train of diseases which malaria rarely fails to inflict upon its victims. Those who have retreated to Shocco from the pestilential marshes of the seaboard, hoping to escape their old enemy, should they be still haunted by the "marsh fiend," may safely hope to exorcise him by a free use of the Shocco water.

C. B. HAYDEN.

Smithfield, January 10th, 1840.

LIVE STOCK.—DURHAM, AYRSHIRE AND NATIVE BREEDS OF CATTLE.

Extracts from the Proceedings of the Fifth Agricultural Meeting in Boston, Feb. 7, 1841.

Reported by the Rev. Henry Colman, Agricultural Commissioner of Massachusetts.

Mr. Sheldon deemed it important that oxen should be broken when quite young; and too much care could not be taken in their early training. Boys may injure steers, if entrusted with the management of them. There are some boys, however, who may be confided in, and their management then is sometimes better than that of grown persons. That which we learn in youth is likely to be retained. This rule applies as well to cattle as to men. Cattle, broken when young, are likewise more able to endure hardships than the later trained.

Oxen should be trained well to back. The best way of teaching steers to back is to slap them with the hands upon there noses. Goads should not be used. Some persons in attempts to induce them to back strike them with their goads upon their forelegs, which is as likely to induce them to jump forward as to back—they may be more easily taught to back by touching than by beating them.

In regard to driving, drivers are not sufficiently careful as to the language which they use. They should not use language without meaning. They often talk to their teams in a language which they cannot themselves understand; and the oxen of course can know nothing about it. He insists that the language adopted in such case is of much importance. He knew a deaf and dumb person who could manage one yoke of oxen well, but could not drive three yokes. If we are careful to say only what we mean, and accustom them to mind when they are spoken to, much will be gained.

He saw twenty-four yokes of cattle attached to a building, but they could not start it. There was a particular driver among the men, who was accustomed to use only one word, and that was, "Come." If an ox did not know what it meant, he would make him know. This man took charge and ordered the teamsters to stand by their own cattle, and to make no movement until he gave the order, "Come." As soon as the order was given all brought their whips down together, and started at once. One man remarked, that whenever this teamster said "come," he was afraid his oxen would split their yoke. The oxen understood perfectly, that if they did not start at this signal, the whip would be felt. If they were thus taught to obey, the cattle would get on much better. * * * * *

There is a good deal in the management of horses, but something may be determined from their looks. He thought there was more risk of being deceived in horses than in men. Men are themselves often deceived in regard to their own horses and cattle, from a habit of thinking that what belongs to themselves, and that to which they are most accustomed, must be best; when, if they belonged to another person, a different judgment would be formed.

He remarked that if a horse "hollows in" from his nose to the top of his head, he would be found ambitious and excitable. A fractious man would make such a horse obstinate and ill-tempered. Some of the best horses toe out and are apt to hit the foot against the ancle. This indicates a quick traveller. The nearer the feet were together under a horse, so that his weight is brought nearer to a point, the more easily he will travel. The best travelling horses are short from the foot lock to the gambel, and long from the gambel to the saddle. * * * * *

Mr. Fay of New-Braintree inquired whether, when steers were first yoked, they should be hitched to oxen or yoked alone?

Mr. Sheldon thought it might sometimes be well to hitch them to oxen. He knew one man who always yoked his steers in the barn, and then tied them up in stanchions, to accustom them to the yoke. It was well to let them wear the yoke in the yard. Great care must be taken not to frighten them; to avoid hurting them; and not to use the whip.

Mr. Welles Lathrop of South-Hadley was then kind enough to give the meeting an account of his valuable stock.

Mr. Lathrop would confine his remarks to the subject of cattle, and to a race of animals with which he considered himself somewhat acquainted. Of the Ayrshire stock he had owned some animals, but none which were full-bred. He thought them valuable for New-England, for our light soils and short pastures. A small animal is preferable to a large one. They may get as much feed as a large one, but will be kept in better condition. He had heard of a small and hardy race of horses on the island of Nantucket, that were left to take care of themselves until four or five years old; a large race of horses could not subsist there.

Mr. Lathrop proceeded to say that Mr. Jaques had effected most valuable improvements. His success had been great: and his stock was of a superior character. He is of opinion, however, that his success would have been better if he had taken for the foundation of his stock, instead of a native, an improved Durham cow.

The improved durham short horn stock, was that which he had adopted, and he highly estimated them. Mr. Charles Collings of England may be considered, in a measure, the founder of this stock. Mr. Collings had long been in possession of the Teeswater breed of cattle, and had made great improvements in the race. From an animal of this breed, crossed with a Galloway cow, he produced a stock which has been unrivalled in the public estimation. This is evident, from the prices paid for them at Charles Colling's sale—when forty-eight animals produced £7115 sterling, averaging more than £148 sterling, or $650 each. This sale had a decisive ef-

fect upon public opinion, as to the value of this stock, and brought them into high repute.

It was the aim of Mr. Collings to reduce the size of the original race of animals from which he bred; and to render them more compact. It is not safe to breed from too close affinities, unless done with great care. If pursued too far, it produces a cavity and deformity between the shoulders. Many breeders have aimed, not so much at good points in the animal, as the increase of the size. The best breeders seek to render the animal compact and close. There is no animal perfect; it is only an approach to perfection that we can make. If an animal in form be too long or too short, she should be crossed with one having opposite properties.

Earl Spencer, one of the most distinguished breeders of improved short horns, says the male animal should approach to coarseness, the neck be thick, and that he should handle well. These facts are established respecting this race of animals,—that they come early to maturity, and that at two or three years old they will make greater weight than any others known.

The color of the pure race is red or white, or red and white mixed. So far as his experience goes, any black or blue tints indicate an impurity of blood. The improvement or formation of this race of animals has been the work of half a century. The progeny will partake of the properties of the sire, or dam, or jointly of both. Some families of the short horns are deep and rich milkers; others have a strong tendency to thrift and fat. The former seem better adapted to our situation; the latter, more suitable for the west. The beef is good; and those portions which are of little value, are of light weight. For milking and dairy properties, he is of opinion that this race can be relied upon. He did not come prepared for detail, but he would refer to two or three cases which had come to his knowledge. A cow, of this breed, owned in Delaware, had given thirty-five quarts of milk per day. Another, owned in Pennsylvania, had given thirty-three and a half quarts of milk per day. The Messrs. Lathrop, themselves, own two cows, one of which gave forty-eight pounds, the other, forty-five pounds of milk per day, for ninety days in succession. Another cow, raised by the late Mr. Williams of Northboro', and now owned by Messrs. Lathrop, upon grass only, had given twenty-eight quarts per day. They had nineteen of these animals on their farm, at South-Hadley, which were Herd-book animals. They had ten more which were high-bred. They had two heifers, which were two years old last spring, and another, two years old last autumn—which weighed 1200 lbs; 1175 lbs; 1065 lbs, on 7th October last. They were so compact and snug-built, that good judges of cattle estimated them at no more than three-fourths of their actual weight. The dams were all deep milkers; and he had sent these three heifers to Philadelphia, to a bull bought of Mr. Bates, a principle improver of the race. This bull was imported by Mr. Joseph Cope, of West-Chester, Pennsylvania, and cost, in England, one hundred guineas, at one year old. Mr. Bates bred with great judgment, and produced animals of great weight. Two animals, imported from his stock, by Mr. Vail of Albany, cost $700 each. The Messrs. Lathrop had two cows, whose dams were sired by Comet.

Mr. Dodge of Hamilton inquired whether a native cow, crossed by a Durham bull, would not produce a calf so large as to suffer in parturition. He had seen this statement. The fact had occurred on his own farm.

Mr. Lathrop answered, that the principal breeders are of the opinion that the progeny takes after the sire, more than after the dam. He had never seen a thorough-bred animal, without perceiving that he partook strongly of the character of the sire. An improved Durham bull will mark his stock strongly. He was not able to answer further than this.

Mr. Dodge was anxious, farther, to ascertain whether the Durham cows give more milk than others, and would yield more dairy produce?

Mr. Buckminster remarked, that England had been sixty years engaged in improving her stock, and we had seen to what point she had carried these improvements. They had doubled the average weight of their cattle, which were sent to market. The important question now is, whether our animals are superior to theirs? Are our native stock better than any which we have imported? He would be glad to have the imported stock, if it is better than that which we have. If our animals are not surpassed, can we gain any thing by importation?

He is of opinion that the English have erred in attempting too much to increase the size. It should be our plan to breed a small race. The middle sized animals are the most profitable for us. The late Gov. Gore introduced a large bull into the country. His descendants are still to be found. Some of the cows died in calving. If the bull is not more than one year old, the calf is not likely to be too large. If the bull should be seven or eight years old, a small cow would suffer. Col. Jaques had chosen a native cow as the foundation of his improvement; and, in his opinion, had accomplished much. He is of the opinion that the cows near London do not give so great a produce as the cows near Boston. (This we believe is an error. The cows in the London dairies, while in milk, average ten quarts; with us not six.—*Reporter.*)

Mr. Paoli Lathrop remarked that, if the bull be a coarse animal, and large when a calf, his calves will be large and coarse. The true Durham bull will produce small calves, weighing from sixty to eighty pounds. His cows, on the same keep, produced a quarter more than other cows, which he had previously owned. A cow which he had from John Welles, Esq., of Dorchester, filled at a milking a twelve-quart pail. He had a calf which, when dropped, weighed sixty-five pounds, and on the day when it was one year old, one thousand and twenty pounds. The calf run with the cow through the season. The cow was kept on coarse hay. A cow kept by Gov. Lincoln required two pails to receive all her milk at a milking. If the bull be fine, the calves will be good; if otherwise, coarse.

Mr. Dodge of Wenham had his bull from Poor's Indian-Hill Farm, at West-Newbury. He was large when a calf, weighing 121 pounds at his birth. He inquired whether large cows produce more milk than small ones? He observed that the cows belonging to the milkmen, who supply the cities with milk, are in general large.

The milkmen select those which give most milk.

Mr. Sheldon of Wilmington observed that for years he had bred some of the Durham stock. He had crossed his stock with Cœlebs, and had half-bloods. The calves were larger than from native bulls. The farmers who are seeking the improvement of their stock, are more careful and liberal in keeping them. Respecting the question of Mr. Dodge, he said that large cows, when full-fed, give more milk than small cows; but when the pastures become dry, they sooner fall away. One reason why the cows owned by milkmen are generally larger than others, is, that they are kept better. Milkmen like to buy two-years old heifers, and the liberal keeping promotes their growth.

Mr. Wild of Sturbridge remarked that large cows would produce more value than small ones, if the keeping be sufficient. If you feed light, a small breed is to be preferred; but you will get more milk from large cows, because they eat more. If not better in quality, it will be more in quantity. In respect to training cattle, he would by all means train them early. If taken after more than a year old, the difficulty of breaking them would be increased. They must not be whipped. If you have well-managed boys, they may be trusted with the breaking of steers, but not otherwise. If steers have arrived at two or three years old, and farmers then put a yoke upon them and let them run, they can never be tamed afterwards. We must not insist upon steers being old oxen. Cattle never get over early mismanagement. In respect to driving cattle, he objects to much talking.

Mr. Jaques remarked that the progeny of an animal depends on his form or shape. Cœlebs weighed 2290 pounds. A heifer calf was brought to this bull weighing 300 pounds; but she experienced no difficulty in bringing forth a calf. If the bull has finely tapered limbs, the calf will be good; if his limbs are large and coarse, the character of the calf will correspond—have large limbs, and a coarse body. We have had very few of the genuine Durham short-horns in New England. Many of the animals which we have received, as specimens, are as fair samples as it would be of our horses, to send them a five-dollar horse. They would not deem him fit to give to their hounds.

The true Durhams have broad bosoms, round ribs, flat backs. Our cows appear to have lost a rib. He likes the Durhams and the Herefords, but we must have animals suited to our soil and climate. He thinks the farmers should seek animals of a medium size. The Durham short-horns are preferred for the London dairies. (The best cows in the London milk-houses are a cross with the Holderness.—*Reporter.*) The bull Bolivar was a beautiful animal. But Mr. Jaques had produced a stock which yielded as much cream as any one. On light soils, the Ayrshire stock will do well. Mr. Cushing of Watertown is entitled to the highest credit, for his introduction of this stock. With his customary liberality, he has given away twenty-two of these animals. In New England, we must have cows which will produce the most milk, butter and cheese. Mr. Jaques related a story, which he said rested upon good authority, of a Durham cow, tied near London, with a little girl by her side, to sell the milk as it was drawn, in pints, half-pints, &c., and that in one day her sales amounted to forty-two quarts. He had seen many good native cows, but we could never be sure of their calves. This had been demonstrated, in respect to several very extraordinary animals exhibited at Brighton. The only way to secure a race is to keep the blood pure. The Durhams strongly marked their calves the stronger the strains of blood, the more certainly we secure the character of the stock. We may, with skill in the selection, affect the color at our pleasure, and by the seventh or ninth generation, accomplish our object. We shall never see a black hair or a black nose on a pure Durham. (It is believed there are exceptions to this remark.) A good breeder, when he gets a second cross, goes back, in order to secure the blood. The flesh of an animal must have an elastic touch, like that of a healthy man, and not like that of a swelled limb, which, when you press it, the indentation remains.

Mr. Colman had not intended to enter upon this discussion, but he felt it due to his official relation to the farmers of Massachusetts, to say that he had had the pleasure of seeing the improved Durham stock of the Messrs. Lathrops of South-Hadley, and he thought them eminently beautiful, and evincing great skill and care in their management, on the part of those gentlemen. He had seen many of the imported animals throughout the country; and one of the herds imported for the Ohio Company, which he saw on their way, was truly splendid, and in beauty and perfection of form, far surpassed any thing which he had ever witnessed.

He must, however, in justice add, that he yet wanted the proof of the Durham short horns being the best stock for our dairies. Seven of the race which he had owned, some full and others half-blood, had been inferior as milkers. The quantity of milk given by many of the animals which he had seen was remarkable; the quality, in general, inferior; though he had found some exceptions to this remark; but these exceptions, he believed, were accidental.

The Cheshire farmers, who were as distinguished as any in the country or in any country for the produce of their cheese dairies, preferred the native stock. From a dairy of eighteen cows, an average of 633 pounds new milk cheese to a cow, in a year, had been obtained. He had challenged in writing and conversation the owners of the short horns in the country to prove by actual experiment the dairy properties of this stock; and he would furnish a list of a hundred cows of our native stock, which had made from twelve to fourteen pounds of butter per week, through the season. He was far from having any prejudices against the improved Durhams. He was an enthusiastic admirer of them; but he wanted their dairy properties tested by actual experiment. A very distinguished English farmer, Mr. Shirrer, who had made the tour of this country, expressed his regret at their introduction, and pronounced them in his book the poorest dairy stock in England. We could not be said to have formed any distinct race among ourselves, excepting the trials made by Mr. Jaques, and a long-continued improvement carried on in reference to milch cows, in another part of the state, upon which he had reported. Much, undoubtedly, yet remains to be done, but nothing in this respect can be effected

but by skill, extreme accuracy of observation, and long perseverance.

He thought the Durhams not well adapted to the scanty pastures and negligent habits of many of our farmers. All high bred animals require particular care and the most liberal feed. Two of the finest oxen ever raised in the country were of this stock. One, it is believed, a full blood, from Greenland, N. H., weighing over 3400 pounds live weight; and one a half-blood, raised in Claremont, N. H., and sent year before last to England, for exhibition. His live weight was said to be 3700 pounds; and he was pronounced in England, by the best judges of stock, as unrivalled for weight and thrift, and eminently well-formed.

The best breeds would soon run out if negligently or severely treated. This race were undoubtedly well suited to the rich pastures and abundant products of the west, of Kentucky and Ohio. There they would flourish. What might be done for our own stock by more liberal keeping, was yet to be seen. He had known a calf from a native cow, at four months old, to weigh nearly 400 pounds; and another, at five months old, to weigh 600 pounds. If the improved Durham stock should prove the best for us, and he kept his mind on this subject open to conviction, we could at once avail ourselves of the distinguished improvements of half a century's skill, and toil, and expense, so liberally bestowed in England. At any rate, the improvements which they had accomplished in England, so obvious and impressive to the most careless observer, read a most important lesson to us, and showed what might be done by skill and care, by judicious selection, by steady perseverance in a regular system, and by liberal keeping; and presented, at the same time, the most powerful motives to exertion and enterprise in a branch of husbandry acknowledged by all to be of the first importance.

THE SIXTH AGRICULTURAL MEETING.—HOGS, HORSES, SHEEP, AND CATTLE.

February 18*th*, 1841.

Mr. Colman, [the agricultural commissioner,] stated—Of swine, there were various breeds now well known among us, and within the last forty years the most valuable improvements had been made in this race of animals. Twenty years ago, a distinguished packer of beef and pork, in this vicinity, said, that the improvements which had then taken place in this stock were worth hundreds of thousands of dollars to Massachusetts. These improvements have consisted in introducing in the place of a long, gaunt, hungry species, a compact, small-boned, thrifty, good humored kind, who were kept at a comparatively small expense; and made large returns for the amount of food which they consumed.

These improvements had been effected mainly by a cross with the Chinese breed; but this was not well ascertained. The introduction of the Byefield breed was perfectly within his own recollection. He had a relative living in Byefield, a parish of Newbury, who attended, as a butcher, the Newburyport market. He found in the market, a woman, with two remarkable pigs for sale, which he immediately purchased and carried to his farm. He did not know the history of these pigs, but this laid the foundation of what is called the Byefield breed, known as such in this country and in England; and which proved a most excellent cross with the best of our native swine.—They were remarkable for their thrift, their early maturity, their good humor, and the cheapness with which they were kept. This was the first important step in the improvement of the breed. This occurred about the year 1792.

The next improved breed of swine introduced into the country was the Bedford. It is understood that some of this breed, which had acquired much celebrity in England, were sent a present to General Washington; and the person by whom they were sent betrayed his trust, and sold them, or their progeny, for his own benefit.

The Mackay, another improved breed, was introduced by Mr. Mackay, who commanded a packet between Boston and Liverpool, or Boston and London; and, having a taste for agricultural pursuits, he selected abroad some of the best stock he could find, and placed them on his farm at Weston, from which many valuable animals have been obtained, and are scattered in different parts of the state. They are a breed remarkable for their thriftiness and plumpness, and for their great weight.

The next valuable breed known among us is the Mocho, a white hog, of excellent thriving properties; but where he originated is not known. Mr. Colman had found this breed in the western and south-eastern parts of the state, in the centre of the state likewise, and in western New York; but was not able to trace their genealogy. The cross with this hog has produced an excellent stock.

The next valuable stock introduced among us is the Berkshire. The pure Berkshire, it is believed, were first introduced into the country by Mr. Hawkes, an English farmer, who came over and settled near Albany. He brought many valuable animals with him; but for some reasons, having given up his establishment, his stock passed into the hands of a very enterprising farmer, Mr. Caleb N. Bement, by whom they were propagated, and have now been widely extended over the country. Mr. Colman remarked that the change which had taken place in the hogs of Albany, which are allowed to run at large in the streets, since the introduction of the Berkshire, was most remarkable; instead of a lean, hungry, prowling, noisy race, objects of universal disgust and dread, there were now every where to be seen in the streets and sties of that city, fine sleek and plump pigs, which appeared to be kept with the greatest care and liberality.

The Berkshire breed, however, were thought by many persons to want size; and a cross of the Berkshire with the Mackay has produced the finest and most thrifty race of animals that had ever come under his (Mr. Colman's) notice. This stock, of the very finest description, might now be seen in perfection, at the place of Mr. Phinney, Lexington, and of Mr. Cushing at Watertown. Finer animals than were here to be found, in Mr. Colman's opinion, could not be found any where. The Mocho breed had likewise been crossed with the Berkshire; and intermediate crosses of the Berkshire, with the Mocho and Mackay together had been equally fortunate.*

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* E. Phinney, Esq., of Lexington, has just graduated

The Chinese breed had likewise been repeatedly introduced into the country directly from China. Mr. Cushing, of Watertown, had now some animals of the pure blood. The pure-blood stock was not large enough for our purposes; but the cross with this breed had always been advantageous; and Mr. Colman believed the Chinese breed to be the foundation of the best improvements in this country and in England.

Mr. Colman considered the fatting of pork of great importance to New England. We could not raise pigs in this vicinity to advantage; certainly not to the same advantage as where pasturing is cheap, and the wash of the dairy abundant; but they might be raised with much profit in the interior, and fatted here. Mr. Colman was satisfied, from considerable experience, that when corn is seventy cents a bushel, and pork will bring in the market six cents a pound, or six dollars per hundred, pork may be fatted to a profit. Hogs are particularly valuable to the farmer, on account of the large amount of manure which they may be made to furnish. If well supplied with the raw material, a hog may be expected to produce ten loads of good compost manure per year.

Mr. Colman expressed his unwillingness to go further in the discussion; his only object being to introduce the subject to the meeting; and he should therefore cheerfully leave the field to others.

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Mr. Jaques now proceeded to speak of the points to be regarded in the selection of a horse. In choosing a horse for a roadster or traveller, he wished to have a light head neatly put on; the neck rising promptly and strong from the shoulders and withers; the neck somewhat crowning or curving on the top and tapering towards the head, with a strong crest. The shoulders should be well laid in, spreading well back, somewhat like a shoulder of mutton. He would have the chest deep and slightly projecting; the withers rising moderately high, and inclining well into the back.

If the withers are low and flat on the top, the horse will be inclined to plunge to the ground; and when fatigued will stumble or fall. But the withers must not rise too high, as he will then appear as though on stilts. Either extreme is an impediment to free and safe action. He should have ribs rounding well out; back short, straight and well coupled, that is, the hips thrown forward, forming a strong loin, and a long lever from the point of the hip to the hock joint of the hind leg. The horse should be of good length from the point of the shoulder to the extreme of the buttock. He should have a strong and bushy dock, and be close and snug under the dock; for if he be large and loose there, he will be apt to scour and be fit only for a door-yard horse. He should be full in the twist, that is, the inner part of the thighs should be well shut together. The head, neck, and body form a lever, resting on the fore legs as a fulcrum; the head being at the end of the lever. If the neck be very long and the head heavy, or the neck quite short and light, either extreme will impede his action. The whole of the machine should be well-proportioned. Much depends on the shoulders being well-placed. The length and size of the fore-arm, is a very important point. He must have a full muscle on the arm, and the shank-bone, below the knee, should be short, broad and flat. When the rider is mounted, he should be thrown back upon the haunches of the horse. The legs should be clean and free from blemish; and when in motion move true, and free from cutting or "wabbling." The feet should be round and steep; the heels broad; the coronet and pasterns of medium length. Mr. Jaques wishes to see distinctly the cords in the limbs. The knee should be large and well-dropped down; the arm above the knee long, and the muscles large and full. The tops of the shoulders, where matched to the withers, should not be so heavily loaded with muscle as to impede their action. He does not object to have the fore-feet move closely to each other; but not so as to interfere. Much depends on the form of the hind leg and the power of the lever, as regards *strength* and *speed*. The shank, hock and thigh should be broad and flat, resembling that of an ox; if so, when in motion they will operate like a plank sprung edgewise and then let fly. He has no objection when the horse is at good speed, to have the hind legs open and spread a little, if there is a free action in the hock-joint. The necks of many horses appear to be wrong side up. He would choose to have him fifteen and a half hands high, and to weigh a thousand pounds.

He went on to say that he considered nothing more valuable than a good cow, which would give eighteen quarts of milk per day, and fourteen pounds of butter per week. He thought it necessary to establish a breed for New England. He deemed it important to import foreign stock, of established blood. Fine individual cows among us, which produce much milk and butter, are often the progeny of a mean stock, and there is therefore no certainty of perpetuating their good qualities. Farmers pay little attention to the character of their bulls, and are always ready to sell their best calves to the butcher.

Mr. Jaques had not had an extensive experience with swine. He disapproved of the system of breeding in and in; and yet there were facts in relation to this matter, which strongly conflicted with the general theories.

He spoke, again, with much emphasis, of the value of sheep; and especially of the adaptedness of the South Down to our wants. His own flock was excellent. Their average yield of wool was four pounds to a fleece. He had one wether, which standing, weighed 219 pounds, and for the meat of which he received twenty dollars.

Mr. French of Braintree inquires of Mr. Jaques how much milk his cows would average per day?

Mr. Jaques has made no record of this. His object has been to raise stock, and not quantity of milk. Some of his cows now give twelve quarts per day. The greatest quantity he has ever obtained is twenty-one quarts per day. He can produce a flush of milk by corn and roots; but it has been his object to raise his stock upon grass and hay, so that when sold, they might thrive upon other keeping, and not fall away. It is often said that the keep determines the quantity of milk. Milkmen can answer this question.

Mr. Cole remarked, that much had been said upon breeding stock, but no great principles had

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from his Porcellian Seminary fifteen hogs, whose average weight was 531 lbs. One of them weighed 728 lbs. As things go, they were every one of them entitled to a doctor's diploma.

been established. Two principles have been assumed. The first, that like produces like. This applies to vegetables, also. This is likely to happen. But it requires many generations to fix this matter, and to render it sure that the ancestor shall transmit his qualities to his offspring.

If a farmer plants only one kind of corn, and studiously avoids any mixture, he may preserve it pure, but if different kinds have been intermixed, it will take some time to recover the original, or to separate one kind from another. He had had a colored corn intermixed with his crop, and it required five years to work out the colored.

He believed that with breeding animals, the imagination has considerable influence. For twenty or thirty years, he had occasionally black, sheep in his flock. This he believed was the effect of imagination on the breeding animals. There was an influence on the progeny, from both male and female. It is said a superior male has most influence. This was probably the case with full bred animals, because their prominent properties had been fixed by a long succession. In Arabia, the offspring, it is said, follow the female side, because there the mares are always objects of the most exact care and attention. As a general thing, it could not be determined which side would most strongly mark its progeny. It was different with blood-stock, or high bred animals.

Another principle, having a material influence, had not been named. Which animal would determine the sex of the progeny? He believed it would be found that the most vigorous would settle this matter. In an experiment made to test this point, an individual had been able, by using a young and comparatively feeble ram with a flock of vigorous ewes, to produce 172 females to 100 males; and this individual had said, if others would furnish the flocks, he would produce, at pleasure, male or female. With one flock, by using very young rams, he produced 76 females to 30 males. By using a strong and vigorous ram, he produced 55 males to 30 females. He divided his flock, according to strength of females; they were between four and five years old, and he produced 25 females to 15 males. In another case, he took ewes under four years old, and put vigorous rams with them, and produced 26 males to 14 females. These were well authenticated experiments which had been made in France. From five young mares, the same individual obtained five females; and in another case, from 15 mares he obtained 13 females. It was to him (Mr. Cole) therefore evident, that the sex followed the most vigorous parent.

Another principle seemed to him well established —that the female offspring resembled the sire, the male offspring the mother. He had tried to raise good cows from heifers from good cows, but he always failed, and was at a loss for the reason, unless it were to be found in this principle. His observations in respect to the human race seemed to confirm this position. Daughters in general resemble their fathers; sons resemble their mothers. It was often said that there had been no distinguished man in society who had not had a distinguished mother; and the character of the son had been determined by her education, her moral influence or character. He was of opinion that this physical law, to which he had referred, had always much to do in the case, as he believed facts, if carefully observed, would fully prove.

In making a cross, he thought the male should be smaller than the female. If the cross is made with large males, the offspring might suffer for want of sufficient sustenance; the animal will be restricted in his growth. Colliogs reduced the size of the animals, which he bred by selecting small males to cross with large cows. In this way, the Durham ox was produced, for which £2,000 sterling had been refused.

Mr. Weld of Sturbridge said that a person, in order to determine what stock he should prefer, should look to the character of his farm. In many cases, the pastures are poor, and we have nothing but meadow hay for our stock. Our pastures and meadow hay might suffice to keep sheep; and he had found sheep more profitable than other stock. The grade sheep, 3-4ths or 7-8ths blood, had been most profitable. He kept 50 or 60. He wintered them on lowland hay, and he obtained three to three and a half pounds of wool. He usually got a lamb from each ewe, and seldom lost more than one or two in a season. His lambs came about the middle of April. If a man keeps sheep for market, he would advise that the native sheep should be kept; if for the wool, he would recommend the 3-4ths Merino.

The stock already in the country was, in his opinion, adapted to our soil. We should take more pains in improving it. In general, farmers raise the calves which first come; and in this very way, sometimes make a mistake. The best calves will show the most activity. There is as much difference in animals as in men. In general, the poorest cows will calve first. He raises his calves on new milk. They should be well treated the first year; the second year, they may have poorer fodder. We may raise as good stock here as may be found in any country.

Gen. Low took occasion to add to his former remarks, that sheep were useful in destroying the white-weed in pastures; the ox-eyed daisy. He had known a field in which, in three or four years, they had completely eradicated this troublesome weed. * * * * * *

Col. Jaques remarked that he knew no way of determining what the sex of the future progeny should be. He himself and an able physician had been making experiments and observations in this matter for thirty years, but without deciding any thing. Males are likely to mark their offspring more strongly than females, because they are bred with more care, and there is more pure blood commonly in the male.

ICE MOUNTAIN OF HAMPSHIRE COUNTY, VIRGINIA.

For the Farmers' Register.

The existence of a mountain possessed of a temperature independent of all external causes, and which was so unaffected by the vicissitudes of the seasons, or the diurnal variations of temperature, as in midsummer, where exposed to the full glare of the noontide sun, to preserve a uniform temperature of 32 degrees, was too singular and striking a phenomenon not to have early attracted

observation. The Ice Mountain has hence received frequent notice, but of so indefinite and frequently exaggerated a character, as to fail to produce a general belief in its existence, or to secure for it that interest which this rare curiosity so richly merits. The Ice Mountain is one of the subordinate ridges of the Cacapon Mountains, and is a continuation of the North River Mountains. This mountain chiefly consists of a sandstone which teems with terebratulas, productas, spirifers, and other marine shells, the exuvial relics of the inhabitants of that primeval ocean, which once rolled over the summits of the then unborn Alleghany. At the commencement of this mountain, many miles south of the Ice Mountain, the rocks are nearly horizontal; but as the mountain proceeds north, they rapidly increase their inclination, until they become perpendicular. The mountain now rises to the height of 700 or 800 feet, forming a mural precipice, whose cragged summits, split and rent, shoot suddenly up into sharp turreted spires, or jagged pinnacles, resembling the battlements of a Gothic castle or the minarets of a mosque. At other times, losing this wildness, it is as remarkable for its singular symmetry, as before for its fantastic irregularity. Still retaining its precipitousness, it rises to the height of several hundred feet, its uniform summit, and rude massive symmetry, its steep rocky sides devoid of vegetation, save where some stinted pine has "cast anchor in the rifted rock," all combine to give it the character of a huge Cyclopean wall. This singular structure has been thus minutely described, both from the unique and singular scenery,

> "So wondrous wild, the whole might seem,
> The vision of a fairy dream,"

to which it gives rise, and from the connexion it is conceived to have with the phenomenon of the Ice Mountain. At the Ice Mountain, the steepness and walled structure is retained, and the mountain forms an abutment or support to an enormous glacis or bank of rocks, which is thrown up against it on its western side. This natural glacis reaches nearly from the base to the summit of the mountain, and extends laterally several hundred feet from its base. This large accumulation of rocks consists of fragments of sandstone, varying in size from a few inches to many feet in diameter, loosely heaped together, and from their irregular angular shape, generally separated by large interstices. This glacis forms the Ice Mountain—the ice being formed and preserved in its interstitial cavities. The Ice Mountain was visited by the writer in the summer of 1838, a season memorable in the annals of western Virginia for its long, distressingly hot drought, so fatally blighting to the crops. The heat of this season, though unparalleled in that region for duration and intensity, but slightly affected the temperature of the Ice Mountain, as ice was found in great abundance by removing the rocks to the depth of a few inches. A thermometer on being introduced into one of the cavities between the rocks, so as to be exposed to the air without being in contact with the rock, rapidly sunk to below 40°, and would doubtless have been still further depressed, had it been permitted to remain. The general low temperature of the rocks was evinced by the moisture which either studded their surface, or trickled from their sides; the result of the condensation of the aqueous vapor of the atmosphere, by the low temperature of the rocks, although at the time the dew point must have been extremely low. During the previous winter the rocks had been removed to the depth of three or four feet, and the cavity thus formed filled with snow, and loosely covered with planks, but so slightly that the snow could be seen through the crevices of the covering; but though so imperfectly protected from atmospheric agencies, the snow exhibited not the slightest traces of the heat of the past summer, and was still as dry, friable, and crystalline, as if newly fallen. The dairy mentioned by Kercheval, has three of its sides surrounded by the heap of rocks, and hence partakes of the low temperature of the mass. The sides of the dairy were not however, as in ordinary seasons, encrusted with ice, nor were icicles pendent from its roof, but its temperature was still sufficiently low to subserve all the purposes of a dairy and refrigerator. The temperature of the spring which issues from the base of the mountain, singular to say, seems unaffected by the low temperature of the overlying mass, and though reputed to be nearly as low as the freezing point, is in reality but one degree lower than the springs of the neighborhood, and no lower than some others in the same county, which vary from 51 to 52°. The scene as viewed from the base of the mountain, was as interesting as paradoxical; on the one hand was the Cacapon River converted into a stagnant pool, its indurated bottom exposed at short intervals—the drooping foliage of the forest—the blighted grain, tinged not with autumn's golden yellow, but a sickly hue, denoting that it had prematurely fallen into the sere and yellow leaf—all too plainly indicating the long-continued action of summer's heat. On the other hand was a mass of rocks below the freezing point, enclosing in its cavities snow and ice, while the spectator himself enjoyed an atmosphere whose bland, spring-like softness formed an agreeable contrast to the distressingly hot one* (96°) for which it had a few minutes before been exchanged.

Having thus given a detailed description of the Ice Mountain, it may not be uninteresting to inquire into the causes which give it a temperature so singularly independent of all those influences which usually determine the temperature of terrestrial bodies—a temperature upon which the summer's heat, neither in ordinary nor unusually long and intensely hot seasons, exerts the slightest influence. The solution I conceive is to be found in the large and unusual collection of rocks, which from their porous, homogeneous texture, are extremely poor conductors of heat. By reference to the foregoing description, it will be seen that on one side is the mountain, consisting of a massive wall many hundred feet in thickness, and heaped up against this as an abutment, a pile of rocks containing many thousand cubic feet. The cavernous nature of this heap, would admit the free percolation of rain, which, during the winter, would form ice in the interior of the mass, and reduce its temperature to the freezing point. The ice thus situated would be entirely protected from all external heat by the surrounding rocks, as ice

* A few moments previous to starting for the mountain, at 2½ P.M., the thermometer stood at 96° in the shade.

in a refrigerator is isolated and protected from the surrounding temperature by the bad conducting sides of the refrigerator. The Ice Mountain only requires for the explanation of its phenomenon, the application of the familiar principle upon which is constructed the common refrigerator, which, by the bad conducting nature of its sides, temporarily effects what the Ice Mountain permanently does; a temperature independent of all external causes. The Ice Mountain is in fact a huge sandstone refrigerator, whose increased and unusual effects beyond those of the ordinary refrigerator, are due to the increased and unusual collection of poor conducting materials, which form its sides.

Similar, though inferior, accumulations to that of the Ice Mountain, from geological causes unnecessary here to explain, frequently occur in Hampshire, and the adjoining counties. Observation in every instance showed them to have a temperature far below that of the surrounding atmosphere. That this low temperature is permanent, is proved by the universal custom of persons residing in the vicinity of these accumulations, so constructing their dairies that three of their sides are enclosed by the rocks in the same manner as the one already mentioned at the Ice Mountain. Even a thin layer of poor conducting materials affords a much greater protection than would be anticipated by those whose attention had not been called to the subject. The means resorted to by the shepherds of Mount Etna, for supplying their flocks with water, exhibits the protecting influence of a slight covering of bad conducting materials. The shepherds, during the winter, cover the snow with a layer of volcanic sand and ashes a few inches in thickness, which perfectly protects it from the sun, and preserves it throughout the summer, thus affording them an abundant supply of water for their flocks where it could be obtained from no other source.

A still more interesting and striking proof of the perfect isolation from external causes, by a poor conducting covering, is attested by the fact, that a large glacier of ice and snow was overflowed by a stream of hot lava from Mount Etna, without being destroyed.* The ice thus covered by the lava was protected by it from the summer's heat, and continues thus preserved to the present day. This can only be explained by supposing that the lower portion of the lava current immediately upon its contact with the ice, was reduced to the temperature of the glacier, and that this reduced stratum, from its imperfect power of conducting heat, protected the ice from the hot lava above.† Whatever may be the explanation of it, or however paradoxical it may appear, the fact is attested by too high authorities to be doubted. Public attention was first called to this interesting fact in 1828, when the discovery was made by Signor Gemmellaro, in searching after ice. It has been subsequently examined by Lyell and other distinguished geologists, who confirm the report of Signor Gemmellaro. Excavations made for removing the ice, have exposed the lava for several yards, overlying the glacier, and so super-imposed, that the relative position of the lava and glacier can only be accounted for by supposing that the latter was overflowed by the former, in a molten state. Monte Testaceo may be instanced as presenting a phenomenon more strictly parallel with that of the Ice Mountain, and as affording a happy illustration of the principle so frequently alluded to. Monte Testaceo is situated in one of the suburban *rioni* of Rome. It is merely a large mound, composed of fragments of earthenware vases and urns, and is supposed to mark the site of an extensive ancient pottery. This accumulation of bad conducting materials preserves a uniform temperature, many degrees below the mean temperature of the climate, and on this account artificial cavities formed by digging in the sides of the hill are used as wine vaults.* In July, 1773, Prof. Pictet found by observation the temperature of one of the caves to be 44°, while that of the external atmosphere was 78°. If this comparatively small accumulation produces this effect in Rome, where the mean temperature is 60°, it can readily be conceived that the still greater accumulation at the Ice Mountain, would produce a similar but increased effect in a climate where mean temperature is but 51 or 52°.†

In endeavoring to elucidate the phenomenon of the Ice Mountain, the effect resulting from the bad conducting power of the rocks has alone been considered. Their nature as absorbents of heat should also be estimated, as from their dull white color most of the heat would be reflected, leaving but a small portion to be absorbed by the rocks. It should also be borne in mind, that the air, immediately in contact with the ice, would be, from its low temperature, specifically heavier than the external atmosphere, except in midwinter, and could only be replaced by atmosphere heavier than itself, which would necessarily be colder. It hence follows that the ice could only be affected by the hot air of summer, so far as its heat is conducted by the surrounding rocks, which, as will appear from the foregoing explanations, must be very inconsiderable. These remarks and the examples adduced, will, it is presumed, sufficiently illustrate the proposed explanation of the low temperature of the Ice Mountain. Should this explanation prove unsatisfactory, it may at least serve to invite attention to the subject, and elicit a more satisfactory solution from abler sources.

C. B. HAYDEN.

Smithfield, March 1st, 1841.

* Lyell's Geology, Volume 2nd, page 124.

† Lava, from its open vesicular texture, is an extremely bad conductor of heat.

MODES OF MEASURING GRAIN.

To the Editor of the Farmers' Register.

Edisto Island, S. C., March 1st, 1841.

In the Southern Agriculturist of May, 1834, I published a "rule for ascertaining the quantity of shelled corn in a house of any given dimensions." I perceive, in your last number, that this rule has been referred to, by a writer in the Kentucky Farmer, Mr. John Lewis. He admits that it is simple, and of easy application, but suggests that it cannot be accurate in cases where a given measure of corn in the ears, turns out, when shelled, less or more than half of that measure. The gentleman is right; the rule is derived from arithmetical principles, and, so far, is correct, but it ope-

* Jameson's Philosophical Journal.

† Deduced from observations on the temperature of the springs.

rates upon the presumption, that a bushel of corn in the ears, will turn out half a bushel of shelled corn. Where this is not the case, it can, however, be modified, and the true quantity ascertained. The following is the process: Measure off, accurately, ten or more level bushels of ear corn, (the greater the quantity the smaller will be the error); shell the same, and by correct measurement, determine what proportion it bears to the corn in the ears. Suppose, for instance, that it is ascertained that the lot of corn turns out 22 quarts of shelled, to the bushel of ear corn. Find the cubic contents in feet, by multiplying the length, breadth and depth of the bulk to be measured, together; multiply the product by 8, and cut off the right hand figure, (not the *two* right hand figures, as stated by Mr. L.) At this period of the operation, we have ascertained the number of bushes of *ear*-corn, and the rule would apply with perfect accuracy, in the measurement of wheat, rye, oats, or grain in bulk; the figures on the left hand are the number of bushels, that on the right hand, the decimal of a bushel. To reduce this quantity to shelled corn, we now make use of the proportion established above. Multiply the figures on the left hand, (rejecting the decimal as unimportant,) by 22, and divide by 32, the number of quarts in a bushel; the quotient will be the number of bushels in the bulk. In a bulk of ear corn which measures 12 feet in length, 11 in breadth, and 6 in depth, there will be found, by the above calculation, 633 bushels and 6 tenths of ear corn, or 435 bushels and 6 quarts of shelled corn.

Example.

12
11
—
132
6
—
792 cubic feet.
8
—
633.6
22
—
32 | 13926
—
435 bushels, 6 quarts.

In this section of the country, the bushel of ear corn will yield about half a bushel of shelled corn; accordingly, adopt the rule given in the Southern Agriculturist. It is the same in principle as that given above, but is more expeditious in practice, owing to our being able to arrive at the result by simply multiplying the cubic contents, when found, by the decimal 4. Thus,

792 cubic feet,
4
—
316.8

Three hundred and sixteen bushels and eight tenths. WM. M. MURRAY.

LIQUID LEATHER.

Dr. Beruland, of Larria, in Germany, is said to have discovered a method of making leather out of certain refuse and waste animal substances. He has established a manufactory near Vienna: no part of the process is explained; but it is stated that the substance is at one stage in a state of fluidity, and may then be cast into boots, shoes, &c.—*Bristol Mirror.*

A NEW AND SUCCESSFUL MODE OF GUARDING PEACH TREES FROM THE WORM.

To the Editor of the Farmers' Register.

Fincastle, Va., Feb. 27th, 1841.

Although my name is not on the list of your subscribers, I have had the satisfaction of reading some of the valuable articles which appear in your journal. Though unacquainted with you personally, as I feel some interest in your periodical, I will take the liberty of introducing myself, by giving a brief sketch of an experiment I have made, with success, on the peach tree; and if you deem it of any importance, or worthy the notice of your readers, you can give publicity to it.

As I consider the peach the most delicious fruit of our latitude, I have long since thought it a desideratum that it should be made independent of the destructive worm which kills the tree. I thought it practicable; and it occurred to me that there was in reach an antidote for the enemy to that luxurious growth. Having observed, in the practice of medicine, that the cedar berry was a powerful vermifuge, I transplanted cedar scions and peach scions together six years since, in the following manner: I set one of each in a hole, with the roots entangled and set close together, believing that the strong odor peculiar to the cedar would prove offensive and sickening to the worm, and thereby prevent its approach to the peach tree. Every circumstance seemed to conspire in favor of the experiment; there was no danger of the peach tree being choked by the cedar, because the former is a rapid, whilst the latter is of very slow growth. The peach scions bore the second year, and have put forth their leaves as black as a cloud every season, and bore most luxuriantly every season, until the last, which was the sixth year. I have set out a number since, in the same way, which are all flourishing. I think a soil should be selected much mixed with sand, in order to prove successful.

WM. N. ANDERSON.

DRAINING.

From the Farmers' Cabinet.

Sir:—A friend has put into my hands a pamphlet on draining, and deep ploughing, by Smith, of Deanston, the inventor of the subsoil plough. It is an interesting work, on subjects that have, hitherto, shared but little of our regard, but which are of the highest importance; for, if we wish to better our condition, we must adopt that mode of management by which England has been enabled to support a population the increase of which has been in the proportion of one third, in a very short space of time, and without which this never could have been accomplished.

The work naturally divides itself into two parts, first, draining; second, subsoil ploughing; which, although closely connected, in beneficial results,

are not, of necessity, dependent on each other, as either the one or the other may be adopted separately, with decided advantage. But it must be confessed, there are, to appearance, serious difficulties to the introduction of either at present, to the extent there proposed, if it be only on the score of expense, for few persons would be induced to incur an outlay of forty-five dollars per acre for draining, and six dollars an acre for one subsoil ploughing in contemplation of future remuneration; such management must, for a season at least, be confined to men of capital and ample resources.

Smith's system of draining is novel; and it is introduced to notice by disparaging that of Elkington, which has, for many years past been considered as the most perfect that could be devised; and the author of the new system admits that many intelligent men still advocate and practise that mode, which is, to carry the drains *across* the declivity, cutting off the springs before they rise to the surface, by which, when they are judiciously laid out, one deep cut has been known to supersede the necessity of dozens when conducted according to the old mode—in fact, one drain has been known to draw off the water from many acres of wet land, a mile or more distant. But by the new mode adopted by Mr. Smith, every field upon the farm, whether wet or dry, or whatever be its subsoil, be it never so porous, is drained at regular intervals, from a distance of ten feet only between the cuts, up to forty; by two feet and a half to three feet in depth, all carried *down the declivity*, instead of across it; which, to any one accustomed to the practice of draining, will appear novel indeed! He says, "it has been pretty generally believed and argued, that drains laid off, in this manner, *on a steep*, will not be so effectual in catching water; but this notion can be shown to be erroneous. Drains drawn *across a steep*, cut the strata, or layers of subsoil, transversely; and as the stratification generally lies in sheets, at an angle to the surface, the water, passing in or between the strata, immediately below the bottom of one drain, nearly comes to the surface before reaching the next lower drain;* but as water seeks the lowest level, in all directions, if the strata be cut longitudinally, by a drain directed *down* the steep, the bottom of which cuts each stratum to the same distance from the surface, the water will flow into the drain at the intersecting point of each sheet, or layer, on a level with the bottom of the drain leaving a uniform depth of dry soil."

Now, it is reasonable to ask what is to prevent the water which rises to the surface by these "strata which lie in sheets, at an angle to the surface," at the top of a declivity *between* these drains, from flowing down to the bottom, if there be not a cross drain to receive and conduct it away? To be sure, it might be argued, that if drains are but ten feet apart, the distance for the water to flow to find them will be but five feet, at any given point; but as water always seeks the lowest level, which is at the bottom of the declivity, it is natural to expect that it will make its way thither directly down the hill, without turning either to the right or left; and this has often been witnessed where drains have been injudiciously placed; indeed, it *is* novel to propose to drain a spouty hill, by carrying drains *down* the declivity, instead of across it. And as to the fear of "the water passing in or between the strata, immediately below the bottom of one drain, nearly coming to the surface before reaching the next lower drain," any regular drainer knows, upon inspection and examination, the proper distance at which to lay off his drains across the hill, to prevent all that.

It is *novel* to find it proposed to drain every acre of the farm, without regard to soil, situation, or state of moisture; and many will consider it a waste of labor, and expense, and by no means necessary. It is indeed strange to find any one advocating the drainage of "beds of open sand and gravel," but so says the book. "In the natural circumstances of the soil on the surface of the earth, the drainage is extremely various, from that of the light, dry loam, incumbent on deep beds of open sand or gravel, to that of the thin, sterile crust of soil resting on massive beds of impervious till: in the former, there is no water springing to that soil from below, and whatever falls upon the surface in the shape of rain, is instantly absorbed, and passes through the sand, or gravel, to some outlet at a lower level;" (then why, in the name of common sense, drain?); "in the latter case, on the contrary, water, whether springing from below or falling upon the surface as rain, must either run slowly off over the surface, however great the distance, or in the event of a horizontal surface, must remain stagnant until evaporated by the sun, or absorded by the atmosphere" (then, in the name of common sense, drain); "on such a subsoil, a sufficient depth of active soil can never be long maintained, for grain; if trenched and enriched by lime and dung, it will bear but scanty crops. Some soils, again, are incumbent on subsoils *partially* pervious to water—such, by judicious management, produce sometimes good crops, in favorable seasons, but when much rain prevails, they are neither large or of good quality; these are unfit for wheat, as the alternate frosts and thaws of winter, acting upon the water in the soil, are sure to throw out the plants. But on those soils incumbent on open rock, especially on whin, or green stone, which is very open, from its many fissures, the land is *uniformly fertile*" (then why drain?) "But," he observes, "the drains should be run parallel to each other, and at regular distances, and should be carried throughout the whole field, without reference to the wet or the appearance of portions of the field; as uniform and complete dryness is the object;" directing that the drains, in a stiff, strong till, be run within ten or fifteen feet of each other; if in a lighter and more porous subsoil, from eighteen to twenty-four feet will be near enough, but in *very open soils*, forty feet may be sufficient. He says; "a very important advantage of having the drain *down the steep*, is the prevention of mud or sand, the current having force, from the declivity, to carry them along to the main drain;" but, he afterwards adds; "indeed, the water passing into the drains by filtration, being perfectly pure, has no sediment to deposite, for even during the heaviest rains, the water passing from a properly made drain, has merely a milky tinge." Now how is this to be understood? If the water is perfectly pure, it will have no tinge at all, and whether at any

* But this will not happen if the drains are conducted, as he proposed, at the distance of ten feet only apart.

time, *milky* or *inky*, must depend on the strata through which it has passed; but whatever the colour, if it has any tinge, there must be sediment. In forming under-drains, it has ever been the custom to lead them by as *easy a descent* as would be prudent, to prevent the possibility of washing, lest they might thus become choked, and blow up; and even Mr. Smith himself seems to admit the danger of this, for he says, "it is quite necessary to fill the drains, which, are carried *down the slope*, with stones of a small size, or with *danders* or *gravel*, to prevent the current of water from cutting or running the bottoms of the drains," and by which they would, of course, become choked, and blow up.

Any how, the subject is one of great importance, and ought to be examined into, with the view to establish some system for adoption whenever necessary; for there is no improvement so great, profitable, or lasting, as draining, when properly executed. M. C.

Wilmington, Delaware.

Mr. Smith has, within fifteen years, formed on his land under drains to the extent of *one hundred miles* in length!

PREPARED NIGHT SOIL MANURE.

From the Farmers' Magazine.

MM. Payen and Buren, chemists, in France, have produced a powder, the mixture of which with night soil, almost immediately frees it from offensive smell. It is then prepared, and when ready for use, resembles fine black mould, so dry and powdery as to be passed through the drill, and deposited with the seed. The efficiency of this manure has been most satisfactorily proved in France. A quantity sufficient for manuring two acres can be packed in a sugar hogshead, at an expense of from thirty shillings to twenty-six shillings an acre.

THE CURRENCY—AS CONNECTED WITH THE INTERESTS OF AGRICULTURE.

From the American Farmer (Editorial).

Text.—"Does the plan and purpose of your work, preclude essays on political economy? (I am fully aware that party politics are properly excluded.) If not, I would suggest that some well selected articles on currency, be inserted. At this particular time, it is essential to the interests of agriculture, that the true and unchangeable principles of currency, be understood by the farmers, so that an end may be put to that false system, by which so many evils are engendered to afflict the country."

Comment.—In the above suggestion of a correspondent, whose valued communications, like angels' visits, are too "few and far between," we heartily agree. "At this particular time, it is essential to the interests of agriculture, that the true and unchangeable principles of the currency be understood by the farmers. But let us first answer the inquiry, whether the plan of this work precludes essays on that subject. When an editor is but the "hireling" of the publisher of a periodical, for a given stipend, he is bound, as long as so engaged, to conform to the views of his employer; and he, like the rest of mankind, must be expected, in the first instance, to consult *his own interest*. Unfortunately for the independence of the press, and the good of society, such are the force and prevalence of deeply rooted prejudices, and the intolerance of party spirit, which soon spring up and gain ascendency in all republics, that he, who, regardless of both, would boldly maintain the cause of truth, and of the public weal, too soon finds himself in the unenviable predicament of the old man, his son and his ass. His journal is deserted by all parties, and himself left, with his family, to starve, unless like a bear, he can live by *sucking his paws!* That system of government is to be esteemed the most perfect, which insures the greatest conformity of individual interests with the interests of the public. A system under which he who in a fit of jealousy, or to avoid the torments of love, throws himself into a gulf, shall be considered a fool—while, for the same action, to save his country, he would be regarded as a hero. Alas! how many publishers of papers might, in this our republic, sacrifice themselves in the cause of patriotism, before one of them would gain for himself the name of Curtius!

We have more than once expressed the conviction, that no class of American citizens can be more deeply interested than the farmers and planters, in understanding the *true principles of the currency*, and in having these principles embodied in the *legislation of the country*. If there be any one sound conservative maxim, more than another, that we would indelibly impress on the minds of our countrymen, it is that they should look more to its *legislation*, and less to its *executive action*, for the developements of our internal resources of wealth and happiness; and the security of private rights and the maintenance of public liberty; and what subject of legislation is more important than that of the *currency*—the circulating medium which shall serve as a standard or measure of value for all the products of agriculture and all other branches of industry? But, to the discussion in this journal of a question so intimately blended with the business and prosperity of every community, there are various obstacles, and difficulties. In the first place, (let the truth be told them frankly, by one who has devoted his labors to their welfare, *con amore*, for more than a quarter of a century,) farmers are, in general, too little addicted to *thinking* for themselves—too impatient of the intellectual exercise necessary to an understanding of this question—not at once seeing its palpable connexion with their every day concerns, they look on it as an abstruse problem, to be studied in the closet of the politician, and solved only by elaborate writers on political economy and the wealth of nations—and secondly, the question has been so mixed up with the struggles of contending *parties*, that it is impossible to discuss it in a paper which honestly aims at the public weal, without being at once set down as the partizan or slave of one or another of the parties contending for supremacy in the government.—How, except in this way, and under this apprehension, can we account for the silence of all our agricultural journals on a subject which, if properly touched, would reach at once, by the "pocket nerve," the sensorium of all their read-

ers? Who that admires, as all must do, the abilities of many of the conductors of our Farmers' Registers, will ascribe their silence on this all-absorbing topic of the currency, to any want of appreciation of its importance, or of capacity to investigate it? Those among agriculturists who cannot be charged with neglect of all intellectual exercise, yet have their feelings too much engrossed, and their reading too much confined to *party* recriminations, or to mere practical details of experimental agriculture in the strictest sense of the word.

Commerce could not flourish without agriculture and manufactures, and their productions as its basis and material; on the other hand what but commerce can give activity and value to the culture and products of the soil and the loom? Again—did any nation ever exist where *credit* was so necessary and important, to purchase labor, to foster genius, and to develope dormant but fruitful resources, as in this vastly extensive and unexplored country, whose mountain sides and valleys need but the plough and the pick to yield unbouded wealth and the means of sustaining a population without limits—yet if an agricultural paper should eulogise commerce, and invoke the legislature to give it encouragement, as the handmaid of agriculture, and the great promoter of civilization and the arts; if it should advocate a system of financial legislation under which credit shall supply to genius and industry the place of capital—straightway it shall be denounced, and by many thrown up, as being inimical to a *party*, whose views have been interpreted and condensed in the memorable exclamation—"perish commerce, perish credit." Hence the difficulty of discussing, impartially, a question which, next after a few cardinal principles of liberty,—such as the freedom of speech and of suffrage, the independence of the legislature on the executive branch of the government, and the trial by jury,—is of the highest practical importance to every citizen of the republic, and we repeat, to none more, if as much, as to the farmer and planter. * * *

We entirely concur with our brother agricultural editor in the general position assumed by him above. The agricultural interest, more than any other, is deeply concerned in securing and preserving a *sound currency;* and though the direction (or misdirection) of banking and the currency, has been heretofore left to the management exclusively of merchants, and bank debtors, and exercised for their exclusive profit, it rightly belongs to the agricultural class—not only because of their legal right, as forming the great and general interest of the country, but because of their much deeper stake in the game. A change of only 5 per cent. in the value of the currency, which is but an ordinary and every-day degree of fluctuation, is enough to alter the value of the lands and farming stock, and other property of farmers, to the amount of perhaps twenty millions of dollars. And when money values are altered by the depreciation of the currency to the extent that was produced in 1815, the losses, or the destruction of value in the property of the agricultural interest, amounted to hundreds of millions of dollars. Truly there is no question of more vital importance to the agricultural interest than the proper regulation of the currency; and we greatly desire, and will lend our humble efforts, in this journal and elsewhere, to extend information on this subject, and to urge the agricultural class to assume their right, and *to act* and to *govern* in this matter.

But it is very strange, that, agreeing so perfectly in the premises, our brother editor and we should differ so widely in our conclusions. For, from his remarks following the above, (and which we do not copy,) it is evident that he considers the policy that would most *restrain* bank paper issues as the most hurtful to a sound condition of the currency; while, on the contrary, we would advocate still more restraint, (though not by the usual and absurd and ridiculous mode of legislative prohibitions and penalties;) and deem irredeemable paper money and irresponsible banking operations and bank credit, existing and sustained merely by government, as constituting the greatest curse of our country. By the fraudulent and irresponsible banking system of this country, a state of general bankruptcy was produced between 1813 to 1819; and a like condition of things is now threatening, unless prevented by restraining or stopping the operations of all really bankrupt institutions. We are far from belonging to the "perish credit, perish commerce" school, stigmatized above. We value, and desire for the country, as much as any can do, a *sound credit system founded on confidence properly placed.* And we would leave banks as well as individuals to acquire and retain or to lose their credit, and the confidence of the public, by their acts, and their reputation for wealth, honesty, and fidelity to their engagements. We would not oppose, but would advocate *free trade* in banking and in money, as in every thing else; and would not object to any amount of banking, if done upon the proper capital and credit of the bankers. But while being thus willing to accord to the business every facility and degree of freedom that any other trade or mode of investing capital possesses, we would not grant a tittle more than other pursuits enjoy by law; but would leave banks and banking to stand or to fall, by their own acts, and their own success and credit, or the reverse, and to be as strictly responsible as any individual traders; and by no means would we consent to build up their credit and their profits, by giving them the use of the money, or sustaining them by the credit, of either state or federal government, and still less of using government interposition in their favor whenever requisite to save them from the proper consequences of *bankruptcy.*

But, whether these or the opposite and prevailing opinions are correct, we and our fellow editor, though standing exactly opposed in conclusions, agree that the subject ought to be brought before our readers and the agricultural community. We shall therefore follow his example in this respect. And, in the first place, as there is a most deplorable want of information, and of *facts*, in regard to the frauds and evils of banking—owing to the influence and power which the banks and the commercial class possess, and exercise to muzzle the newspaper press—we shall endeavor to throw some little light upon this deeply darkened and disguised subject. The weekly summaries of news, which have been presented in our weekly issues, have been principally made up of bank items; not from previous intention, but because, in the two months since the publication was commenced, there have been as many and important bank events—resumption and re-suspension of payments, acknowledged and unacknowledged bankruptcies, wholesale frauds of officers, &c.—as ought to be looked for in twenty years. We shall continue this record, and print together the weekly summaries of banking news at the close of each monthly number, and also present some more extended views and arguments, for the purpose of giving light where it is so much wanting.--Ed. R.

INFLUENCE OF NATIVE MAGNESIA ON VEGETATION.

From the Journal de Pharmacie.

The presence of magnesia was regarded as a cause of barrenness in lands, until the investigations of Bergman proved magnesia to form one of the principal constituents of fertile soils. This inquiry has been taken up by Prof. Giobert, who concludes from various experiments: 1st, that native carbonated magnesia is not injurious to the various functions of vegetables; 2nd, that on account of the solubility of magnesia in an excess of carbonic acid, this earth can exercise an action analogous to that of lime; that a magnesian soil may become fertile when the necessary manure is employed. From these facts naturally proceeds the conclusion, that if the magnesia was dissolved in an excess of carbonic acid and water, and had entered, like the lime, into the composition of the sap, it ought to be found in the plants with the potash, lime, oxide of iron, &c. M. Abbene has ascertained this by the analysis of the ashes of plants which had grown in magnesiferous mixtures. He has also confirmed the experiments of Prof. Giobert as regards the influence of magnesia on vegetation being analogous to that of lime; and he likewise concludes that when lime and magnesia exist in arable lands, the former is absorbed in preference by the plants, on account of its greater affinity for carbonic acid. The barrenness of magnesian lands is not referable to magnesia, but to the cohesive state of their parts, to the want of manure, of clay, or of other composts to the large quantity of oxide of iron, &c. Barren magnesian soils may be fertilized by means of calciferous substances, as rubbish, chalk, ashes, marl, &c., provided the other conditions be fulfilled.

THOROUGH DRAINING.

From the Ayr Advertiser.

I would particularly impress upon you the importance of furrow or thorough draining as a means of improvement. Its wonder-working effects have only to be seen to be appreciated, and not the least astounding fact connected with its history is this, that while a difference of opinion exists with respect to most other agricultural matters, there is no instance of any person remaining unconverted with respect to thorough draining, where the practice has been at all known in his district. To show you the extent to which thorough-draining is carried on in Scotland, I shall mention one instance—in the county of East Lothian, a very small county, above 3,000 miles of tile drains were made in the year 1839, besides stone drains. But nothing would surprise you so much as to see the land which it is there considered necessary to drain, land which would here be considered perfectly dry. I had a letter, a few days since from a friend of mine, an extensive farmer in East Lothian, who thus writes upon this subject:—"Every day's additional experience convinces me more and more of the immense extent of land, at present considered dry, which actually requires to be furrow drained, and which would, in a very short time indeed, amply remunerate the occupier, were the operation carefully and correctly performed, notwithstanding the heavy outlay, which makes it almost a landlord's question. We have at present thirteen men cutting drains in one field, and the quantity of water in every drain is almost incredible; and this on land that was thought *dry ground*, and a part of the small quantity of ground deemed *turnip* land in Fenton twenty years ago." I should trespass too long on your time were I to enumerate all the advantages of thorough draining, even supposing I could enumerate them; but there are one or two so obvious, and of so much importance that I cannot avoid mentioning them:—1st, You may do away with narrow ridges on drained land, by which a great point is gained—the making what are at present deep furrows, and producing nothing as productive as the rest of the field. 2d, Less manure will suffice. Lord Gosford, from the opinions I have heard him express, will tell you how great an enemy to manure water is, which explains the reason of this effect of draining. 3d. Less seed and labor will be required. 4th. Your crop will ripen evenly. 5th. You may clean your land of weeds at almost any season, and while you have more time to remove them you are likewise cutting off one great *cause* of their growth. In conclusion, I would particularly press upon you this consideration, that if it is worthy a farmer's while to pay men for making drains in a country where daily laborers are earning 10s. per week, how much more inexcusable in you is it, having your own hands to work with, and, probably, much spare time, to allow your land to suffer from that fatal disease which may be well compared to dropsy in the human patient.—*Mr. Filgate's Speech.*

REMARKS ON SOME PORTION OF THE "PRIZE ESSAY" OF DR. WM. L. HORTON.

An essay on manures, and other means of enriching lands, by Dr. Wm. L. Horton of Harford county, Md., was published in a late number of the 'American Farmer' in the imposing attitude of having received the prize offered by the proprietor of that paper for the best essay, to be prepared and offered on that subject, and with that view. The high ground thus assumed for this communication, and which will probably cause it to be republished and praised in many other papers, makes it proper for us to take some notice of it—instead of passing it unnoticed, as would otherwise have been done, if judging it upon its merits, instead of its pretensions.

This essay is any thing but a practical guide to agriculture. The opinions advanced and directions given do not appear to be the result of experience and practical knowledge. Whether practical or theoretical, there is but little in the essay that is either new or original, and that little is worthless. Some of the things which we admit to be both new and original, are the following opinions on turnips and white clover:

"As to turnips, they are a very worthless vegetable, and not worth the trouble of cultivation. Six or eight bushels are as many as any farmer need care about raising."

"White clover bears the same rank, in the estimation of the writer, among grasses, that the turnips do among roots—"a very worthless kind of thing"—I would never wish to see a spear of it on a farm of mine. It is a cursed vine that runs from Dan to Beersheba—It is a pest and intruder. We intend to serve it as others have served the Canadian thistle—salt it."

We deem no particular comment necessary on this rare and sweeping sentence of condemnation.

Of lime, as manure, the author speaks in very high commendation, but with even less information than on most other branches of his subject. However, he rejects the different received opinions of the mode of operation, and presents a theory of his own, which, as we cannot pretend to do justice to by abstract or abridgment, will be copied at length in his own words.

"It may be expected that we should offer our views as to the *modus operandi* of lime; this part of the subject we approach with some diffidence, and without any pretension to freedom from error; but as we have embarked on the troublesome ocean of philosophical speculation, we may, as well as our compeers, hazard a conjecture, leaving it to our readers to judge of its accuracy.

"Lime cannot long remain in the soil as a calx, calcium, or quick-lime; but by its attraction of carbonic acid from the atmosphere, it becomes a carbonate. In this primary action of absorbing carbonic acid, a portion is at the same time taken up by the plant. But why, it may be asked, is lime so durable in its effects upon the soil? That lime has the effect of loosening a heavy, clayey soil, is a point conceded by all who have used it on such soils. I do not believe, with Professor Ducatel and some other chemists, that the oxalic, or any other *free* acid exists to any considerable extent in any soil; lime then is *not* necessary to neutralize an *acid* in the soil. Calcium, or quick lime, is more readily dissolved than the carbonate; and as almost all plants, and particularly wheat and oats, contain a portion of lime, they may receive it as a part of their necessary food in this way. Carbonate of lime, or lime-stone, requires a much larger quantity of water to dissolve it; nevertheless it is while in the soil always undergoing a slow decomposition, and is thus taken up by the plant.

"It is admitted by all who have used lime on such soils, that it renders clayey ones lighter, and sandy soils more compact. The experiments of the writer have been on a soil of the first description—argillaceous—and before he used lime he had great trouble in pulverizing it. Land that was limed five or six years ago is at this time quite sufficiently pulverulent and friable.

"How does lime produce this effect? Is it merely such a mechanical division as is effected on clay with sand, or is it something different?

"Certain bodies, although they may not enter into chemical union, attract each other—repulsion is a property of other bodies. Let us take quicksilver for instance. The ultimate particles of this metal have an attraction for each other, as may be observed when violence is used to separate them, they form into innumerable sphericles, or globules. With some substances it will enter into chemical union—with others it will form no such compound. We never see, nor hear of, a *carbonate* of quicksilver. It will *mix* with some metals as an amalgam. Tin, lead, silver, gold, are of this class; but it will not mix with iron. There is such a powerful repulsion existing between turpentine and this metal, that the more you attempt to unite them, the more the metal flies into a million parts and utterly refuses an admixture until it is reduced to an impalpable powder or oxide. Honey of the same consistence will not have any such effect.

"Lime has a metallic base—calcium—and Orfila says that clay or argil has also—aluminum—others deny this to clay; but it does not destroy our hypothesis, which is this:—that lime and clay are two distinct heterogeneous bodies; and that so far from having a chemical affinity, or attraction for each other, they are decidedly repellent, and that in attempting to mix them they not only refuse to come in contact, but fly asunder like the balls of an electrometer—or the dust from sealing wax excited by electricity.

"If it be said that the division is mechanical, and such as would be effected by sand, we deny the assertion, and can prove to the contrary in two ways. 1st. We say that the same quantity of sand will not have the same effect on clay. 2d. That a *solution* of lime will cause clay to become friable. Then beside the natural food which lime affords to plants it loosens the stiff clayey soils, and renders them permeable to their roots in search of their necesary aliment.

"If it be true, as is asserted by many, that lime

renders sandy soils more cohesive, it follows as a corollary of what has been said concerning lime and clay, that the other two are more homogeneous in their nature; and that a kind of adhesive attraction exists between them, thus rendering such soils more retentive of moisture.

"These are merely speculative opinions of the writer, which may not be new to others; they are so however to him. He attaches no great importance to them; yet thinks them quite as reasonable as some others that have been propagated on higher authority."

It is indeed an unquestionable and a very valuable effect of lime, and other calcareous manures, to render stiff soils lighter, and light soils stiffer. But so far from this being the sole or main operation of lime, or mode by which it adds to the productive power of soils, it is surpassed by several others, only one of which the author refers to, (the neutralizing of acid principles,) and that but to deny it, upon his mere *ipse dixit*. If lime did nothing more than to alter the texture of soils, (however beneficial that may be in addition to other more important benefits,) we would readily admit that it would not be worth applying. We do not pretend to unravel the author's explanation of the *modus operandi*. It is however not a little strange, and amusing, that one, making such pretensions to science, and using scientific terms so freely throughout the essay, should make so gross a blunder, as is done in the above extract, as speaking of "calx, calcium, or quicklime," as synonymous terms, descriptive of the same chemical substance. *Calx* was formerly used, before the general adoption of the modern chemical nomenclature, to express the very opposite of *quick-lime*—that is, the *carbonate of lime*, or lime, *mild*, and not *quick*. Kirwan so uses the term "calx" throughout his "Essay on Manures," a work which Dr. Horton either has read, or ought to have read before undertaking to enlighten the world on this subject. "*Calcium*" which he twice uses as but another name for quick-lime, and expressing precisely the same sense, is neither *quick-lime* nor *carbonate of lime*—but the metallic base which modern chemical discovery has shown to be one of the elements of lime. It is no more *lime* than hydrogen is water, or than soda is common salt. It is true that in a subsequent and totally distinct paragraph, the author speaks of calcium in its proper sense. That can only be accounted for by supposing this paragraph to have been subsequently added without noticing the contradiction to the foregoing and more substantive part; or that this was put down immediately after consulting books, and the two previous statements upon *general knowledge*.

Of marl, (which is treated of as being a different manure from lime,) there is no mention in the body of the essay; and it is only after having put down all the prose and also the poetry designed for the article, that the author remembered, and in a "postscript" mentions this manure, which has been so largely and beneficially applied in his own state, (Maryland,) to go no farther from his home. All that he says on this branch of his general subject is contained in the following lines:

"*Marls.*—We have unaccountably overlooked these valuable materials for manure, and think proper to say something concerning them here. Marls are mostly found near tide water. They abound from the Hudson to the Gulf of Mexico, in the alluvial formation. They are of two kinds, argillaceous and siliceous, with carbonate of lime. In applying marl as a manure, attention should be paid to this circumstance, as the siliceous will be better for clayey soils, and so on the other hand the argillaceous for sandy. The lime they contain is either from decayed shells, or from shells worn down by attrition. They are durable manures, and should not be neglected when they can be obtained at a reasonable expense."

To *green-sand*, the writer gives something more of space. He has never seen the earth, but suggests that its valuable constituent, for manure, is not *carbonate of potash*, as some preceeding scientific investigators have taught, but *carbonate of soda*, which he supposes (for what reason he has not stated) they mistook for the other. The new suggestion is perhaps worth as much as the old, which it is opposed to; and Dr. Horton's opinion on green-sand has the additional merit of being less likely to mislead, by the authority of his name and scientific reputation.

THE MARQUIS OF TWEEDDALE'S DRAIN-TILES MACHINE.

From the Farmers' Magazine.

This machine will make 10,000 drain-tiles a day, one man and two boys to attend it, and 20,000 of flat tiles for the drain tiles to lie upon; but if the tiles are broad, for rooting, it will make 12,000 a day. These draining tiles are fifteen inches long, so that three machines would make in one season (of thirty weeks) as many tiles as would lay a drain from London to York. Now, a man and two assistants will only make 1,000 drain-tiles in a day, and these only one foot long, which is 1,000 feet per day; so that if the drain be laid at a distance of twenty-five feet, it will make in one day sufficient titles for six acres. The advantages are—1st, the tile is much stronger from being compressed, and less pervious to water; it is not only compressed, but it is smoothed over, which gives it a surface as though it were glazed. They are capable of being made of a much stiffer clay than usual; and in nine cases out of ten the clay may be used directly on being dug, if passed through the crushers, being much drier. Clay unfit for bricks and tiles, by the common method, is available by the machinery. The expense of draining will be paid in three years, but not unfrequently in one.

PRODUCTIVENESS OF PUMPKINS.

From the Western Farmer and Gardener.

Gentlemen :—In my last pamphlet, I observed two mammoth pumpkins spoken of. I wish to inform you of something of the same kind. I saw on a piece of ground, about 75 feet square, this fall, 130 pumpkins, and I saw one of them weighed—the weight was 150 lbs., and I am sure that the whole number would have averaged 100 lbs. or upwards. They were raised by Jonas Beeson, Esq., on the bank of the Ohio, in Wood county, Virginia. Yours,

A SUBSCRIBER.

A VISIT TO MR. ALLEN'S PIGGERY.

From the Albany Cultivator.

Messrs. Editors—Being at Buffalo a short time since, and having heard much of the celebrated Berkshire and China stock of swine, and being an admirer of fine domestic animals withal, I determined to make a visit to Mr. Allen and ascertain whether his stock realized the description I had often had of them.

The farm of Mr. A. is charmingly located on the immediate bank of the Niagara river, two miles below Black Rock and five from Buffalo. The ride is a pleasant one. You are scarcely out of the city on a broad and noble avenue, before you are within Black Rock, which stretches along the river for upwards of a mile, on a broad and level street, with several mills attached to its immense water power, created by the great state pier which walls in a portion of the Niagara river, and here forms the head of the Erie Canal, and supplies it with water for half its length towards Albany.

One can hardly imagine a pleasanter location in the summer season, than is presented from the house of Mr. A., having a fine view of Lake Erie some five miles distant; the town of Black Rock and the steeples of Buffalo, with the ascending highlands stretching far away beyond them—the broad and clear Niagara, here two miles wide, checkered with beautiful grassy islands, and the green cultivated shores of Canada opposite. The canal passes immediately in front of the house between the main road and the river, giving every desirable facility of access and transportation east or west, by canal boats every hour in the day.

Mr. A. B. Allen was not at home, having gone to Ohio to pass the winter; but I found his brother residing there for the present, who kindly showed me their extensive establishment, and gave me much valuable information regarding their stock, and other matters appertaining to the domestic and improved animals of our country. The piggery, including a new erection recently enclosed, is now 100 feet long, by about 30 wide and two stories high. It is divided off by a spacious alleyway in its whole length through the centre in two long ranges of rooms. These are subdivided into separate pens from 8 to 12 feet square, as circumstances require, and fitted up in the most approved style of convenience. In these were the breeding sows, some with young litters of pigs, others two or three together, and some single, as their different conditions and circumstances required. In one end was a steaming apparatus, with huge tanks or vats for steaming the food, supplied with water by a large cistern under the building. Overhead were stored quantities of straw for bedding, corn, oats, Indian meal, shorts, &c.; in a word, all the varieties of food with which the swine are fed. Placed at proper distances through the building were glass windows which pushed back and forward as ventilation was required, but always admitting an excellent light through the day into each apartment. In the rear of each enclosure was a small door for the passage of the animals out into the open air in good weather, and for exercise, a thing almost daily practised. In short, every convenience which thorough and approved breeding required, was here furnished in a cheap and economical manner. Surrounding the piggery, were three or four grass fields for the summer range of the swine, with temporary pens erected for shelter, and suitable feeding troughs in their proper places.

As you will observe that every thing for the convenience and due accommodation of the animals was in apple-pie order, I shall now attempt to describe what I saw of animated nature within. The first object that struck my eye on entering at my right, was an enormous, yet beautifully proportioned Berkshire sow, with eleven young pigs at her side, about three months old. This magnificent animal (excuse the term, for I can assure you that although applied to a *hog*, it is to one so elevated by the successful application of a noble science in natural economy, that the coarse material of the animal is transformed into an almost superior nature from the common groveling brute of the name,) I learned was imported, with three other sows and a boar, (Sultan, the finest and largest animal of the kind I ever saw,) last year, from Berkshire in England, at a great expense. They were all from separate stocks, in no way related, and of incomparable value to Mr. A. in enabling him to avoid the *in-and-in* breeding system, which much of the finer stock of our country is subjected to, for the want of proper selections from foreign stock of the same blood. This in-and-in plan of breeding, Mr. A. has always avoided, and has spared neither pains nor expense in importations and selections from the best stock of this country, to improve and cross with his own, and make it what it now is beyond a question, the most extensive and superior swine breeding establishment in America, if not in the world; now consisting of between 30 and 40 of the finest breeding sows, 2 imported boars, and pigs of every intermediate stage and growth.

But to the detail. This fine sow would weigh as she then stood, near 500 pounds, was in a capital condition and of a perfect model. Fancy could not picture a more beautiful creature of the kind; she was gentle too, as possible, and quiet as a lap-dog. These pigs, I learned, were all engaged at $40 to $50 the pair in the spring. In an adjoining pen was another fine young imported sow with 5 pigs equally good with herself, and all perfect of their kind. Adjoining them also, were the two remaining sows of the last importation, now about fifteen months old, and promising in size and appearance, to equal at the maximum, either of the others. Passing along I observed the fine and stately sows purchased

last summer of the Shaker family at Niskayuna, and of Messrs. Meigs and Middleton of Albany, all select animals of excellent form and proportions. Then, again, were a fine pair of young sows from the stock of Mr. Rotch, of Otsego, one of the most scientific, perfect, and fastidious of breeders, not excelling in size, but in beauty of proportion and fineness of limb, perhaps surpassing almost any other. Here too were Ravenhair and Picaninny, the prize animals of the flocks, bred with all the honesty and good management of Justice Harwood, one of the principal managers, besides many others, the reserved stock from time to time bred by Mr. Allen himself. Many of these noble sows would weigh four to five hundred pounds in good breeding condition as I saw them. Their food was principally cooked shorts obtained from the flouring mills at Black Rock, a coarse yet substantial food, with occasional changes of corn meal, potatoes, raw and boiled, sugar beet, boiled corn and oats, as the health or appetite of the animals required, both of which were studiously observed, daily and continually by a careful manager. No animal that I saw was fat, yet all were in good condition, and of course contented and *well to do.* Scattered along throughout the pens, I observed several pigs of various ages and sizes, which the closing navigation had prevented shipping away, or which had been reserved to add to the stock of grown animals; for I found that it was the policy of Mr. A. occasionally to part with a superior, or even a favorite from a well established breeding sow or boar, in extraordinary cases, when he had others equally good at hand, or coming on; but that he made it an undeviating rule never to sell the very best sows in his herd; and by that restriction never suffering any one to possess a better animal than himself. I fancy that if all breeders would adopt and adhere to a rule so correct as this, the standard of perfection in domestic animals would not fall so low as is often witnessed in our country.

After inspecting for several hours, and with great interest, the inmates of the piggery, I was shown in another building, each in his own distinct apartment, the two boars Sultan and Prince Regent. The former is of the latest importation, and is now two years and a half old; an enormous animal, whose weight, if in high condition, would be about 600 pounds. For so large an animal he is fine in his points, being long, rangy, high shouldered, and broad in his hams; of great constitution and vigor, in fine, a most valuable animal for the extensive pork countries of the west, where great size and hardihood are in demand. The other, Prince Regent, now about 18 months old, is the most perfect male animal of the swine family that I ever saw. His size is medium, now weighing, I should judge, about 300 pounds; his head remarkably small and pointed, his ears short and erect; his neck short and highly set; his shoulders broad and firm, body round, deep and long; hams large, well set, and tail properly elevated, with a beautiful silky black hair, and the usual white intermixture of the improved Berkshire in the finest style and fashion. His pigs have proved remarkably fine. Several of them were shown me of uncommon symmetry and excellence. The stock also of Sultan, has proved remarkably good, and those which I saw at this establishment can hardly be excelled. In short, I know not how Mr. A. can improve his present selection. He has been for several years engaged in breeding and selecting his animals. No one has taken so much pains as he has; his opportunities have been good, and thoroughly improved; his eye and judgment are correct and discreet; and he has, as a matter of course, excelled when perseverance, intelligence and a high sense of integrity in his business have been called to the aid of a natural enthusiasm, and laudable public spirit. Not only personal advantage to himself is the result of all this labor, but a vast public good, and it is no exaggeration to assert, that by the services of this individual, and other spirited breeders of domestic stock in this country, our agricultural profits will in a few years be enhanced millions in the diffusion of improved breeds of domestic animals throughout our several states.

I should not omit to state that I also saw several breeding sows of the celebrated China breed, which is yet retained in its perfection at his establishment. Although much less in size and length than the Berkshires, they are still the original of all true excellence in the family of swine, and by many are preferred for crossing the native breeds of the country, to any other. They are exceedingly scarce in the United States, and I know of no other piggery in the country that possesses them. They are beautifully spotted of about equal parts of white and black; are quiet feeders, easily kept and early matured. The *gentleman's hog*, the world over.

Having viewed the piggery in all its parts, and admired its order and good management, I accompanied Mr. A. into the house, where he showed me numerous letters and correspondence, which, to judge by their bulk, must be no trifling affair of itself. There were letters of inquiry; others containing orders; some soliciting information; others imparting it. The writers were statesmen, planters, farmers, large and small—professional men and merchants, breeders of fine stock in distant parts—in fact, from all classes of our citizens, the attention of each of whom has been turned to improvement in his domestic stock, and who intends to be on the high road to excellence in all these important subjects of domestic economy. I found that during the past year Mr. A. had sent pigs to Maine and Georgia, and to almost every intervening state on the sea-board, and to Wisconsin and Missouri at the west, and to Tennessee, Kentucky, and the intermediate states in the Ohio Valley. I confess I saw with honest pride that the highest talent of our country was not too exalted to overlook the substantial improvements so rapidly making in our agricultural stock; and when we find numerous exalted individuals of the present time, diligently devoting a part of their attention to the improvement of domestic animals as they now do, it is a gratifying indication that we are in a state of rapid progression. Henry Clay is said to be one of the best and most extensive stock breeders in Kentucky. He last year ordered a pair of Berkshire and China pigs, each from Mr. Allen, and a pair of valuable Chinas were also ordered by one of the wealthiest retired gentlemen in the vicinity of Boston. I name these things as no matter of form, but to show that gentlemen of the first

talent, intelligence and wealth of the country are sedulously turning their attention now, to what a few years since was considered in America proper only for the vulgar and illiterate. And why should they not? The most extensive breeder of short horn cattle in England is Earl Spencer, recently Lord Althorp, and so attached is he to remaining at home and attending to his stock, that it is said he will only go to London on matters of high state affairs, where he is often officially called, when he can do so with entire convenience to the welfare of his favorite herd of short horns!

The success which has attended Mr. A.'s exertions in breeding swine, has brought extraordinary demands upon his coming supply, which cannot much exceed the orders already on hand. Contrary to the common opinion, that the dissemination of these fine animals over our widely extended country, would lessen the demand, it has only tended to increase it, and from present indications, for years to come the demand will keep pace with, if not exceed the utmost efforts to supply a sufficiency of *first rate* stock to those who require them. It should be matter of honest exultation and pride that our agriculturists have so far awakened to the dignity, to the true interests of their profession, as to seek improvement where it has been so long and so heedlessly neglected.

My curiosity was somewhat excited to know by what means Mr. A. was enabled to supply orders for such a distance as he did in many cases, being more than 1,000 miles, with three or four transhipments by water, and occasionally land carriage for many miles. I learned that in all cases the purchasers give the directions of the route to follow, and when the pigs are shipped, either at Buffalo or Black Rock, by steamboat or vessel, or from the farm by canal, with proper directions, they usually reach their place of destination with despatch. Occasional misfortunes occur by accident or bad feeding, want of care, &c., in those to whose charge they are entrusted, by which a temporary disappointment is sometimes suffered by the purchaser; but time and good feeding soon restores the young emigrant to its wonted condition. There is, however, a disadvantage to the appearance of any animal, and particularly so of swine, in transporting it to a great distance, but it must be encountered by those who will have valuable stock, and the risk is abundantly made up in the possession of the animal itself. During the last fall, upwards of 150 head of improved Berkshires left Mr. A.'s piggery for Ohio alone; and 19 went in one lot to a plantation in the interior of South Carolina, without serious accident. I was told that the boar Prince Regent, before spoken of, got so stunted on his passage from England, for want of proper care and feed, that it took him several months to recover his thriftiness, and it may always measurably affect his size.

I find, gentlemen, that I have told you a long story; but as I am an enthusiast in the admiration of fine animals of every description, I have thus spun out my epistle. I cannot close however without mentioning that, in addition to the herd of swine, Mr. A. has a choice selection of valuable short horned cattle, which he is rearing with great care. They now consist of ten or twelve head, all Herd Book animals. Since selling their former admirable stock at the west, upwards of a year since, where they have been deservedly admired, the Messrs. A. have recommenced this useful branch of stock raising. Success to their efforts; none better deserve it, and few have made greater exertions to excel in this truly noble as well as valuable undertaking.

A WESTERN FARMER.

WHAT CONSTITUTES A SPECIE-PAYING BANK? AND WHEREIN DOES IT DIFFER FROM A NON-SPECIE PAYING BANK?

> "The time has been,
> That, when the brains were out, the man would die,
> And there an end; but now they rise again,
> With twenty mortal murders, on their crowns.—"
>
> MACBETH.

If the questions, which are used to head this article, had been asked a few years ago, there could have been no difference or doubt as to the answers; and the asking would have been deemed both as unnecessary and absurd, as to ask, "What is a horse? And wherein does a living horse differ from a dead one?" But the times are changed—and with them, the common mode of expression, of reasoning, and even the very moral sense of the public, in regard to banking operations; and the distinctions between right and wrong—truth and falsehood—honesty and the most bare-faced moral frauds and violations of faith by banks—are no longer manifest, or considered important to be preserved. The portion of the community who suppose that their interest is concerned in continuing the abuses of banking, (and they have been permitted heretofore to influence and direct the course and policy of the country in regard to banking,) have proceeded from one position to another, from one ground of justification and of claim for the banks to still stranger ground, and have more and more refined, and "split hairs," in their propositions and reasoning, until, at last, it can no longer be pronounced, without fear of contradiction, what or where is a *non-specie-paying* bank, among all the banks and branches in Virginia.

Formerly, for a bank to deserve the character of *specie-paying*, and its bills of forming truly a *convertible currency*, it was absolutely requisite that all legal demands, whether in its bills, or checks for deposites, should be paid promptly and fully, and without denial or objection, or difficulty of any kind being opposed to the demand. Any obstacles and delays to weaken or defeat the claim of the creditor indirectly, would then have damaged the sound reputation of a solvent and responsible bank.

Now all this is changed. All the banks and branches in Virginia, exceping two in this town, (which peculiar circumstances compelled to abandon all such pretence,) have been, since February 1st, and still are, what, in the current language of the day, are called "*specie-paying banks.*" Yet, we have before presumed to pronounce, and still pronounce, that there is not even *one* bank or branch in Virginia, that deserves the character of specie-paying.

It is highly important to the interest of the great agricultural community to know the truth in regard to even this question alone; and, as it is an isolated question, which may be discussed separately, and without the neccessity of attacking, directly, the main defences of the general banking policy and *banking ethics* of this country, it is possible that on this one separate question, at least, the truth may be reached, and made clear to our agricultural and country readers, whose interests, are not concerned in keeping the truth concealed, and in sustaining every misdeed and moral fraud perpetrated by the banks.

In the first place—plain as this question would be considered under other circumstances, and easy of satisfactory solution, there is almost an entire want of *facts* in regard to the present payments of the banks in Virginia, except such as each inquirer may learn from merely verbal and private information in the neighborhood of each particular bank office. The newspapers are either silent on every point on which truth would be of disservice to the banks, or, more generally, utter what the bank authorities prompt, and wish the public to believe; and no opposite statement is permitted to go before the public, until concealment is either no longer possible, or no longer profitable to the banks.

Thus, for example, the principal newspapers of this state not only announced the commencement of a full and *bona-fide* payment of specie by the banks of Virginia, on Feb. 1st, but proclaimed and boasted that specie payments were continued —and would be continued in spite of every thing —*after* the Philadelphia and Baltimore banks had *again* suspended payments. If any contradiction of this boast of the banks has since appeared in any one of the principal newspapers of Virginia, or of the union, it is more than we have been able to learn. It would be as vain to look to the commercial newspaper press, any where south of Philadelphia, for full and correct statements in regard to the banks, as it would have been under the rule of the Inquisition of Spain to have sought in that country for testimony against the doctrines and claims of the catholic church. We therefore readily admit that we have no *direct* testimony that all or any of the various banks of Virginia, other than those of our neighborhood, are not now in the fullest sense "*specie-paying banks*"—in as much as not a word of contradiction in any newspaper has reached us, to the *general* declaration of general specie-paying, which had been put out by all the banks and newspapers on Feb. 1st. But, we may venture to *infer*, (in the absence of all more certain and trust-worthy testimony,) that the general course of all the banks of Virginia, in this respect, is alike—and, at any rate, that the course of all the different branches of one bank must (in essentials) be the same; and, if we shall show that there is certainly no specie-paying bank in Richmond, nor in Petersburg, it cannot but be believed that there is no such thing in all Virginia—if indeed, now in any other state south of New York.

For greater certainty and clearness, let us narrow our ground and our observations to the town of Petersburg, in which we reside. Of the three banks *here*, as before stated, two stopped specie-payments, immediately after the first news of the last suspension in Philadelphia, and after only six days of (so-called) "resumption of payments' in Virginia. This *stoppage of payment* would still have been called (in bank language) *continuing to pay specie;* but a check on one, and bills of the other bank, having been promptly *protested*, and the demand for specie, by check, having been *enforced* upon the Farmers' Bank, the pretence of paying specie, as kept up by other banks, would have been manifestly futile and ridiculous in these cases *at home.* The question then is settled as to these two banks; and they are entitled at least to the credit of confessing (no matter how reluctantly it was extracted from them) that they *do not pay specie*; and in this respect, at least, they deserve more commendation than any of their "specie-paying" sisterhood.

The branch bank of Virginia of Petersburg, then, is the only one of our three banks which still professes to pay specie; and we shall proceed to examine the value of that profession. And here let us remark that we take that office as a sample, and from which to infer the conduct of all others, because we fully believe that none other in Virginia has better complied with its obligations, or better deserves the character of a "specie-paying bank." And we are thus particular in acquitting this bank from charges which many others are justly obnoxious to, because of our desire to subject one whose course we deem the least objectionable, of all known, to the test question of *specie-paying* or not.

This bank pays (since February 1st,) all its own notes presented for specie, and has paid *some* checks. But the circulation of Petersburg, and of all the surrounding country, is filled up almost entirely with the paper money of other and remote banks of Virginia, and of North Carolina; and scarcely can a note of the Petersburg branch bank of Virginia be found in the circulation of the town. We have examined every note which has passed through our hands since early in January, and can assert that, in the two months, we have not seen a single note of the Petersburg branch bank in circulation in this town. Of the other two banks, very few of their own notes (and which they do not pay) have been met with in that time in circulation here—all of which together would not have amounted to a hundred dollars.

A person who had heard nothing concerning the tricks of the banking trade, would be at a total loss to conceive how the circulation of any town and its neighboring country, consisting exclusively of paper currency, should be almost destitute of any notes but those of the banks of distant towns, with which there was no trading connexion. We, who are not in the secrets of the banks, can only infer the causes and the motives, from the visible course of procedure, and the general results. Since the general bank suspension in 1837, (which came unexpectedly upon the banks here, and before they had prepared to *pay specie* as is *now* so easily done,) it has been the policy of all of them to send the notes of each bank as far from home as possible, and to use, in their issues, the notes of the most distant banks. The wide extent of Virginia, and the little commercial intercourse between several of the different sections and the existing system of mother banks and branches, all admirably helped to aid this object. Of course we *cannot prove* that the notes of the different banks were systematically exchanged for this purpose; but we all know these facts: that, as a general rule, a check on the bank of Virginia, at Petersburg, would, (unless some peculiar circumstances caused an exception,) be paid in notes of other and distant branches, or, still more generally, in North Carolina notes entirely. Nobody objected to these notes of other banks, (as they had both a legal and moral right to do,) because, all being non-paying banks, the notes of all were equally good, or equally bad. The friends of the banks of course wished payments to be made in this manner, for the benefit of the banks; and the few enemies who dared to avow hostility, had no ground to object to this substituted foreign paper, as it was equally current, equally responsible, and alike *inconvertible into specie*. It is easy enough, then, to understand how, by this policy being pursued for years together, that each bank should very effectually fill the circulation of its own sphere of operations with foreign notes, for which no demand on it for specie could be made. And thus, every bank and branch in Virginia has been so far safe from any considerable demand for specie, made by presenting its own notes. But this exception cannot last long. There is now an inducement, which did not before exist while no notes were paid, to return all notes to the sources whence they issued, and where alone they possess the value of being convertible into specie. Already the brokers (who alone can and do, for their own gain, either curb or punish the worst transgressions of banks,) are working to produce this end; and their operations would soon compel all our banks to be honestly responsible, or to stop, if the expected legislative act of indulgence and indemnity should be withheld.

Well! we have satisfactorily explained how it it is, that so far, it has cost the "specie-paying banks" very little specie to claim and maintain that character, by paying their own notes. But their heaviest responsibility was upon checks—and these they *refuse* to pay, except in "current notes," which new (but now very current) term means the worst money that the bank, for its own purposes and gain, has chosen to receive on deposite—as the notes of Wheeling, and Winchester, and Wytheville, and Kanawha, by the Richmond banks, and the notes of North Carolina, by the Petersburg banks. Thus this principal source of claim for specie is effectually cut off.

We will not undertake to affirm that this course is indefensible at law—though we fully believe so. But it certainly never could have been designed to be permitted by the charter. If the law indeed sanctions such an evasion of the obligation to pay specie, then it would be just as well to remove every check and restraint. For when once the people have been accustomed, by use, to this new principle of banking and of bank morality, it can be extended so as to cover every desirable case. If the most remote branches in Virginia are not far enough apart, and enough unconnected in trade to prevent the return of the notes, nor even the exchange with (*or borrowing from*) the North Carolina banks, to effect the desired purpose, then the notes of Virginia may be sent to Tennessee and Michigan, and the notes of those states brought here and made "bankable" money, and of course "current notes;" and it would be then next to impossible to draw enough money even from a solvent bank, to compel its insolvency to be tested. If this system makes a "specie-paying" bank, it is very ridiculous for any contest to be made, either by the bank men *against* paying

specie, or *for it*, by their opponents. We would not give a cent to choose between this kind of "specie-paying," and the most open, bold, and fraudulent denial to pay a single dollar, on any ground of claim whatever.

It is one of the common arguments of the day, which we may hear any where in the streets, and which are as current as the banks' "*promise to pay*," that "the bank has received on deposite all sorts of notes—not only of all the branches in Virginia, but of the banks of North Carolina—and that it would be monstrous, and most unreasonable and unjust, to demand specie for checks, drawn for deposites so constituted." Now, in the first place, the rule thus set up for the bank, if good, should work both ways. If North Carolina notes, for example, are to be paid out to checks, because such notes had been deposited, (*by the bank's own rule*, adopted for the bank's own benefit,) either by the drawer, or by others, in ordinary business, then it certainly would follow, that a depositor of specie, or of notes issued by the bank, should rightfully draw specie, or these only specie bringing notes, for his checks. Yet it is well known that such would *not* be permitted, unless as a matter of favor to the drawer, and a departure from the rule of the bank's *right*. All checks, for money previously and generally deposited, stand (and of right ought to stand) on equal footing; all deposites which the bank chooses to receive as its own notes, are thereby made the same (as to that bank) as its own notes; and the bank is in every sense bound to pay for them in its own legal and proper currency. If the consequences were likely to be inconvenient or injurious, and if the practice had not been adopted for the special benefit of the receiving bank, it would be very easy for it to refuse to receive deposites in any notes except such as it agreed to redeem in specie; or, if receiving them, to return them for payment to the banks whence they issued. But this returning foreign notes and receiving their own, is precisely what the banks wish especially to avoid.

But, in fact, (though it is not required to sustain our position,) it is just as convenient and easy for a bank to pay specie for deposites made in one kind of *paper*, as another. Whether made in the notes of the bank receiving the deposite, or of North Carolina notes, it would not add a dollar to the bank's stock of specie; nor would the payment diminish that stock more in the one case than the other. If then it be true, (as is alleged in defence of the banks,) that it would be "impossible for them to pay specie for deposites made in foreign notes," it is equally true that it would be just as impossible to pay them if every deposited note had been of their own issue. We are very willing to admit the impossibility in both the cases.

As it presents a curious incident in the history of the progress of irresponsible banking in this country, we will copy the notices of this bank, (signed by the cashier,) under which it claims exemption from paying checks, and seeks to avoid all such demands. They are now stuck up at the counter of the Branch Bank of Virginia; and under these, or some equally potent safeguards, the like exemption from paying checks is maintained by all other banks in Virginia.

"*Notice.*

"All deposites made in this office are to be considered as made in current bank notes."
Oct. 16, 1839.

"*In addition* to the above notice, depositors are further notified, that in order to avoid any difficulty at the counter, they are required to make their checks payable in CURRENT BANK NOTES."
Feb. 11, 1841.

Thus, if this be indeed a "specie-paying bank," (and if this is not, then there is certainly not one in Virginia,) it is guarded at all points against paying specie to any extent either injurious to the bank, or beneficial to its creditors, or to the public interest.

First, all of its own notes (by some means, whether designed or accidental, natural or supernatural, it is not our business to establish) have been taken out of the home circulation, and substituted by others issued by remote banks; and, therefore, readily as its own notes may be redeemed by the bank, there are almost none that can be presented for redemption.

Secondly, all deposites are rendered irredeemable in specie, by virtue of the above notices; or in any other currency than the worst paper money which the bank may choose at any future time to receive.

Thirdly, even if the bank authorities opposed no such obstacles as are above stated to the making payments in specie, the fear of their enmity, and the tremendous influence which they wield over the trading community, would deter nearly every individual from claiming his just rights.

And fourthly, lest all these safeguards should prove too weak, the aid of new legislative enactments will be called in, and of which the purport and force are yet to be seen; but which will certainly fail of their designed object, if they do not secure the banks still more effectually than now, against all possible demands to pay their debts and comply with their obligations.

The three banks in Richmond, like the one spoken of here, pay bills of their own issue only; and, still more strictly, pay no checks, and have paid none, (as a general rule,) since their pretended resumption. It is only a matter of inference that all the other banks and branches in Virginia

do no better, and therefore are *not*, now, nor have they ever been, even for a day; truly specie-paying banks. And if any doubt now exists, we think it will be speedily removed by their admission of the fact of general re-suspension. That will probably be the acknowledged state of things before this article can be issued from the press. The North Carolina banks, which occupied precisely the like grounds, (of pretended resumption of payments, and real continued suspension,) have already, since the foregoing remarks were written, thrown aside the thin disguise, and for the purpose of saving the brokers the trouble of collecting their notes to obtain specie, and themselves from the odium of refusing to pay while professing to be "specie-paying" banks. The Virginia banks will all follow the same course as soon as it shall be deemed less profitable to them to keep up the present deception, than to publish the truth of a general refusal to pay all demands. If the lapse of another week does not bring them to this result, two months certainly will.—Ed. F. R.

March 12.

ON THE CULTURE OF RICE-GRASS.—LEERSIA ORIZOIDES.

From the Southern Agriculturist.

Pendleton, October 21, 1840.

Mr. Editor:—In the hope of inducing some of our farmers to turn their attention from the exclusive cultivation of cotton, to the improvement of stock, I send you the result of eight years' experience in the culture of hay, on a piece of meadow land, one mile distant from the village of Pendleton. Two branches, whose united streams are sufficient to turn a small grist mill, are kept continually running over the meadow, except during harvest. A day before cutting we remove a small obstruction placed in the natural channel of the branch, when the water leaves the land sufficiently dry for the mowers to work, and a narrow wheeled two horse wagon to take off about 800 lbs. at a load. Immediately after harvest, the bar is replaced across the channel in a few minutes, by drawing mud against a rail laid over it, and the land again put under water. Having made abundant crops of hay several years, at so little expense, I last year laid off one acre, had the wagon carefully loaded by a white man, directing him to make every load as near as possible of the same size, and on weighing one load, found the average product of the acre to be more than three tons, of two thousand pounds each, at the first cutting. The same directions were followed this year, and the product was more than four tons at the first cutting. This greater product may be attributed to a late harvest, and a summer of more rain.

The soil on which these crops were made, is the ordinary quality of low land, near the creeks overflowed only by high freshets. It had been cleared and cultivated several years, producing good crops in dry seasons. I first saw it in 1831, when the corn on it was nearly destroyed by a wet season; in '32 it produced more weeds than grass, they were all moved—in '33 I was astonished by the product of hay, which has been good ever since. This hay is made from the rice-grass, the "*Leersia Orizoides*" of the botanist, called Nimble Will, in the upper country; it has a fine thin stalk, covering from four to five feet in length, but not being erect, it does not stand more than three to four feet on the ground; no part of the stalk is one-eighth of an inch in diameter, they have been measured more than six feet long. It grows well on the low grounds of branches, and may be found in every part of the state: it is killed by frost, and does not grow in the interior, before May.

I have made various experiments with red clover, herd's grass, orchard grass, and timothy, the two former on wet and dry soils; after two or three years they have been overpowered by the native weeds, grasses, briers and shrubs, which spring up spontaneously when the soil is unbroken. The single enemy of the rice grass is the rush, large and small, which appears to be the only noxious growth of land covered by running water, and this is so entirely outgrown by the rice-grass, that notwithstanding its formidable appearance in the spring, I have taken no measures to eradicate it. By the end of June the rush is so completely covered by the grass, that it is scarcely thought of until the ensuing spring. One great advantage of this grass is, that you can choose the time for cutting, as it does not blossom early. Towards the end of July it seems to settle or lodge in spots, but I am not aware of any injury that results. We commence mowing with a brier scythe, the first fair weather after oat harvest,—the task is a quarter of an acre for the mower; one woman can toss and turn half an acre, which should be done as soon as it is cut, and put up into cocks by evening. When the dew leaves them next morning they are opened at the top, and after an hour's sun on them, all the hay cut before twelve o'clock of the preceding day, may be carted home and put away. Eight or twelve hours' sun is sufficient to cure the hay, if properly tossed and turned immediately after cutting which is easily done with a wooden hay fork. An iron fork is used for loading and unloading the wagon.

The bloom and seed appear late in September. A few days before we expect frost, a second crop is cut and harvested. As this occurs at a busy period in October, we have never measured or weighed the product of an acre; it has been variously estimated at a third or half of the first cutting.

I have never made any comparative experiments of the nutritious qualities of this hay, but have been informed that it sells in the Columbia market as readily as northern hay. One of our most experienced farmers told me that he preferred it to corn blades when wagoning to Hamburg.

Yours, respectfully, C. C. Pinckney.

VEGETABLE TALLOW.

On the 2d of March, Dr. Royle and Mr. E. Solly read to the Asiatic Society two distinct

papers on the vegetable tallow tree (*Valeria Indica*) of the Malabar and Canary coasts. This tree, which has been figured and described by Rheede, is found in the Wynaad and Bednore districts, growing abundantly both in the interior and along the coasts, where it is called the Piney, or Dammar-tree. It grows to a great size, and supplies excellent wood. It also supplies a varnish which is used on the coast in a liquid state: but, when dry, is commercially termed *copal* and *animé*. By boiling the seeds, a fatty matter is obtained, which floats on the surface, becomes solid, and somewhat resembles tallow; being in its most important characters intermediate between wax and tallow, and well adapted in its properties, as a substitute for common tallow, both in the manufacture of candles, and likewise for many other purposes to which the latter subtance is now exclusively applied. This vegetable tallow emits no disagreeable smell at any time; therefore, when candles are made of it, they have not that offensive smell which attends common tallow candles, Dr. Babington placed a portion of this vegetable tallow in the hands of a candle-manufacturer, who praised it very highly; he having succeeded in making good candles of it, which came freely from the mould. In 1825, it sold at Mangalore at twopence-halfpenny per pound. Some brought from India, in January, 1838, sold for £2. 4*s*. 6*d*. per hundred weight—nearly the price given for good Russian tallow. Mr. Solly thought that if it could be obtained at such a price as to admit of its being imported as a substitute for common tallow, its valuable and superior properties would soon obtain it a market. Mr. S. Dyer, of the Madras Medical Service, who had long resided at Tellicherry, stated, that the tree will grow readily, even when the branches are put into the ground; and many of the trees were planted on the roadsides in Malabar, about twenty years since, a greater period than is necessary to bring the tree generally to perfection.

NORTHERN OPINIONS OF SOUTHERN AGRICULTURE AND AGRICULTURAL PUBLICATIONS.

To the Editor of the Farmers' Register.

Shrewsbury, N. J., 2 mo. 19, 1841.

ESTEEMED FRIEND,—In reading the editorial article on a common objection to agricultural periodicals, as contained in the number of the Register just received, I was sorry to notice thy *opinion*, (for such I must accept it, although stated as a fact,) viz.: that nearly all the farmers north of "Mason and Dixon's line" hold every thing in and about southern agriculture, and agricultural opinions, in supreme contempt.

This is, indeed, a grave charge, and did we not verily believe such an opinion of us to be erroneous, we should be inexcusable. The privilege that I have had of associating with some of the distinguished agriculturists in at least four of the states north of said line, emboldens me to *deny it*.

Thou surely cannot be aware of the esteem in which Ruffin's 'Essay on Calcareous Manures' is held with us, to say nothing of the compliments and praises (which thou calls 'unsubstantial food') offered to 'Arator' and other southern agricultural writers.

I have estimated as a prominent advantage attending farming, that of a freedom in good measure from that petty and narrow-minded jealousy of the success of others in the same line which so commonly attaches to most other kinds of business.

I am proud to say, that the disposition "*to do good and communicate*," as relates to successful modes of improving our practice, is, and I hope will always be, a leading feature of our *craft*.

I pray that national, much more sectional feelings, may never produce "supreme contempt" for the honest opinions or practice of one tiller of God's earth, wherever his lot may be cast.

Commending thee to a reconsideration of thy remarks, and more full inquiry as to our lack of fraternal regards, and if we are, indeed, alienated from our southern brother farmers, bear with us, we entreat it of thee, and with our folly as patiently as may be, and trust to kindness, persuasion and forbearance, to win us back to the bonds of good fellowship. ROBERT WHITE, Jr.

We receive the friendly and well-meant rebuke of our correspondent, in a better spirit than that which prompted the hasty and *too general* expression of ours, which he censures. If the words were to be taken *literally* and strictly, and without any allowance for the manner in which they were brought in, we would admit, to the fullest extent, that all the censure of our friend was deserved. But while confessing the wrong of not having mentioned, or referred to as existing, the exceptions to the rule which we stated, we must still maintain our opinion as *generally*, though certainly not *universally*, and, without any exception, true. We could present sundry striking proofs of the *very general* disregard by northern agriculturists, and agricultural journals, of southern agriculture, (even the most improved and admirable,) and agricultural opinions, which would justify our strong expression of this general opinion amounting to evincing "supreme contempt." But the evidences are not only uncalled for, but would be objectionable for very obvious reasons. But though, in the rapidity of uttering a mere incidental and parenthetical remark, we stated the general proposition, without referring to the exceptions, it certainly was not with any intention of denying or concealing them, or because of undervaluing them. On the contrary, our past volumes have exhibited, among the most valued of their contents, the communications of several northern farmers, and enlightened friends of agriculture; and their good opinion of the work we have the honor to conduct, (which is principally an abstract and exposition of southern agriculture,) has been abundantly proved in their continued support of it, and also in the excellent contributions of some of

them to its contents. And the good opinion entertained by even these few individuals, enlightened and judicious as they are, of our own labors, and their continued support, are so highly valued as to go very far to compensate for the neglect or disregard of all others of the great northern agricultural community. Besides our present correspondent, with whom we have but recently been acquainted, (and connected as reader and publisher,) we may be permitted to mention, among the few, but highly valued exceptions to the cause of neglect or contempt of southern agriculture and agricultural publications, too *sweepingly* expressed, the names of Walker, Hulme, and Vanuxem, of Pennsylvania, of Beekman and Wadsworth of New York, and of Colman of Massachusetts, who have given us highly prized evidences of their favor and approbation, and by whom the readers of the Farmers' Register, as such, have been instructed, or otherwise greatly benefited.

But still, "the exception proves the rule." While we value very highly the marks of approbation, and the long continued favor of the very few northern agriculturists or others who have bestowed them on our labors, or on southern agriculture, the existence of these few facts, and also of the few northern farmers who have visited, seen and appreciated the admirable farming, and enlightened views of improvement to be seen in some parts of Virginia, serve but to make more striking and remarkable the general opinion, (or total want of all opinion,) entertained in the north, of southern agricultural practices and opinions. It is very true that our agricultural practices, in ninety-nine cases in the hundred, are wretched and abominable; but such is also the case even in the northern states, and still better farming countries. And we of the south at least receive readily the instruction and lights of the north, (for we derive almost all our reading from the north—agricultural, and on every other subject,) while the very existence of southern publications is scarcely known to the great mass of northern agriculturists. But enough—and we will say no more than to repeat to our correspondent and friend the assurance that we highly value the few cases of exceptions to which he belongs, and that it was very far from an intention to count the approbation of such persons as "unsubstantial food." The application for which this expression was designed, was to high (and sometimes greatly exaggerated) praises of our labors and our publication, from persons who have never given any other evidence of valuing either—and who have not in any other manner aided our exertions, or attempted to advance their great objects, whether as literary contributors, as subscribers, or by using their influence to extend the knowledge and circulation of the work. Such praises, we cannot but rate as "unsubstantial food," and count them not much more as evidence of the interest felt by, and the sincerity of the utterers, than are the newspaper puffs of many periodicals, which can be supplied in any quantity, and of any degree of *strength*, according to order, and either upon *purchase*, or *exchange*, if not as *alms* to the begging publisher. In our case, however, we have never been indebted for praise to any of these means; for, however common the practice, or made legitimate by long usage of the trade, we never have begged, bought, exchanged, or otherwise bargained for any puff or praise, from any quarter, and we too heartily despise the practice, ever to resort to it. Whenever puffing shall be essential to the support of any publication of ours, it will sink at once.—Ed. F. R.

ROHAN POTATO.

From the Western Farmer and Gardener.

All accounts, both in Europe and in this country, agree in stating that the increase of this potato is remarkably great. It has therefore become a prominent article of cultivation amongst the tillers of the soil. It was first cultivated by the Prince of Rohan, in the neighborhood of Geneva, and from the great returns which these potatoes made in their products, they soon attracted the attention of the agriculturists of Europe. In one instance, in France, they produced 40 fold, and in another 62 fold.

The remarks of Viscount Morel-Vinde on the nature of the Rohan are valuable, showing particularly the best method of cultivating them.

"1. The Rohan potato," he says, "keeps together its tubers round the foot of its stem, and this property permits its being earthed up as much as desired.

"2. It produces its tubers so near the surface of the earth, that, without earthing up, many of them would show themselves above ground, assume a green color, and exhibit a great want of maturity. This property shows the absolute necessity of a large earthing up.

"3. This potato has need of moisture being around the foot of the stem, the elevated position of the tubers exposing them the more to drought. It is this property which renders it indispensable to allow its large leaves to remain on the ground for the sake of the shade afforded by them.

"4. It carries flowers on almost all the stems, but it bears no apples, which may be explained from the circumstance of the large size of the tubers. The tendency of the sap constantly towards the tubers absorbes the elements necessary to the formation of apples, and deprives the plant of this mode of propagation.

"5. To form and ripen the large tubers, it requires to be a long time in the earth. It ought thus to be the first planted and the last taken up.

"6. I shall now speak of the quality of this potato, that varying according to the nature of the ground, and as often from different tastes;

but at Celle Saint-Cloud I have subjected it to various cooking and culinary processes. I have had it tasted by great amateurs of the potato; and if its quality is not superior to several fine and more succulent kinds, it is found at least to be of a good taste, sufficiently mealy, and superior to most of the kinds employed in feeding cattle or making starch."—*Edinburgh Quarterly Jour. of Agricul.*

In the Farmers' Magazine, England, there is a notice of a Mr. Kimberly, who obtained, from 60 moderately sized tubers, 24 bushels full measure—the vines growing 8 feet. Another year he obtained also a most extraordinary yield from them. It is said, that in Paris this potato is frequently exhibited of ten pounds weight. There they are cut in slices of about two inches thick, boiled well, and are pronounced very farinaceous, or mealy, and of fine flavor.

Mr. Geo. Hezlep writes to the Albany Cultivator, that from two Rohans, weighing 11½ oz. planted in 12 hills, three feet apart each way, he obtained in October, 175, or two bushels, heaped measure, weighing 118½ lbs. And this without any extraordinary pains—some manure only in the hills, and two hoeings.

Mr. Henry H. Hopkins writes from Auburn to the same paper, that a gentleman raised three bushels from one potato.

Mr. A. M. D. Robertson, from Rock River, Wisconsin Territory, states that 13 Rohan potatoes planted late, in 18 hills, after suffering much from the cut worm, produced a barrel larger than a flour barrel full, and 3 pecks over.

J. E. Ferre, of Agaivam, Mass., raised from one tuber, weighing 6 oz. 34 lbs. of Rohans, being 68 fold.

It seems unnecessary to quote more examples of this kind, particularly as the above are but trifles in production from this singular species of the potato, compared with some others we cannot refrain from giving, especially as we shall shortly arrive at some well authenticated statements regarding it in our own immediate neighborhood.

Mr. Jas. J. Jackson, of Wellsborough, (Va.), says, in the Albany Cultivator, that from one potato, weighing 10 oz., with 53 eyes, he raised, the last season, 134 lbs., measuring two bushels, being an increase of 214 fold in weight; two pieces planted in a hill.

Mr. Levi Robbins, of Copenhagen, N. Y. planted 6. lbs. 12 oz., somewhat injured by frost and the grub worm, and notwithstanding these disadvantages, raised 70 bushels.

But we desire more especially to direct the attention of our western farmers to facts connected with the culture and produce of the Rohans in our own section of the union, the experience of every day more and more convincing us that it is to experiments of all kinds in agriculture *in our own part of the country* that we ought to look for correct information, and not generally to what answers in the east or in Europe.

We have then, without referring to the enormous yields of this potato in some parts of the west more distant from us, to go to facts within only a few miles of Cincinnati.

Mr. T. Worthington has, with sufficient accuracy for our purpose, ascertained in the cultivation of these potatoes, that their yield here is prodigious in comparison with other sorts. He purchased half a barrel of them for seed, and obtained from them 160 bushels. He planted them last season rather later than they should have been, and in ground which became soon after strongly bound by hard rains; they came up for some time with very slender stems, and the ground when hoed was of course cloddy and in an unfavorable condition for their growth. Some of his neighbors saw them, and predicted bad results, yet notwithstanding these disadvantages, (the season however was favorable,) the above (160 bushels) was the produce from half a barrel: and this was not all, their size must not be omitted—their weight is from 1 to 4 lbs., (we have them in our office for inspection,) one now before us weighs 4 lbs. 8 oz. Mr. Worthington feels confident that next season, with the best culture, he can raise them to six and even eight pounds. To show that the growth of this potato is naturally large, it has, unlike some other kinds whose growth may be termed forced, no hollow in the middle—and with respect to the quality of the Rohan for the table, if it is not first rate, it seems deserving of rank among the second class, but we are not able with our present knowledge in this particular to recommend it. From 2 lbs. of the Rohan, we have obtained 4 oz. of starch, while from the same quantity of the light blue potato, 3½ oz. of farinaceous matter was yielded. We have to state, however, that the starch from the Rohan was not so white as from the other. Mr. Worthington would recommend two eyes being planted in a hill at three feet apart, although he planted only one eye in a hill last season. Mr. W.'s opinion as to this kind of potato requiring pretty deep hilling, perfectly coincides with the advice of the European and eastern cultivators. There is a great saving of labor both in the seed, and in the crop in the harvesting.

Upon the whole, we are of opinion that the increase of two kinds of root crops, the sugar beet and Rohan potato, would be a great improvement in this part of the western country. We think that here both will be far preferable to turnips, Swedish turnips, &c. for stock, as affording the greatest amount of nutritious food from the same quantity of land, and at the same time the most milk-producing vegetables for cattle in winter; and the potato, when distant from a profitable market, as boiled food for hogs. E. J. H.

SYNOPSIS OF THE CULTURE OF RICE—ON BLACK RIVER.

From the Southern Agriculturist.

On our way to Society Hill, we stopped a few days with a friend on Black River. It was not our intention to investigate the culture of rice at that time, and although we had passed over the Santees, the Sam-pit, and stayed a few days on Black River, and moreover was at the very period when this could have been best done, yet as we had set out with a specific object in view, we were loath to abandon it, and therefore left the culture of rice for some future examination, when we propose visiting all of the rice districts in the same season, investigating the several modes of culture, and by bringing them together enable our plan-

ters to judge of the merits of each, and avail themselves of such hints or details of practices as may be most conducive to their interest. But as it may be some time yet before we can perform this, we will here give the outline of culture pursued on Black River, a more detailed account of which we are promised.

Open trench planting.—The ground is prepared by either ploughing, harrowing and breaking with the hoe, or dug and made fine with the hoe only. This depends on the nature of the soil, and the time at command. The ground is trenched by trenching ploughs, which makes five furrows at each time. The rice is first "clayed," that is, the rice intended for seed is spread out thinly on the thrashing floor, and fine clay being mixed with water, to the consistency of white wash, is thrown over the rice, which is then stirred, and each grain becomes enveloped in a thin coat of clay. It is then fit for use, or may be laid by for a few days. This is only done when it is intended to sow in open trenches, for were it not done, the rice would float as soon as the water was put on, but being coated with clay, it retains its place in consequence of the increased weight from the moisture imbibed by the clay. The ground being properly prepared, the rice is sown in the open trench and not covered, but water is immediately put on, and the field kept in this state for about twenty days, or until the rice "floats," that is, the rice having grown so large that its specific gravity and the slight hold its roots have of the earth, are unable to overcome its buoyancy, and it is detached and floats on the surface of the water. As soon as a few of the plants are observed to be in this condition, the water is run off and the field dried. It is then hoed once or twice. When in the third or fourth leaf, (about the forty-fifth day from planting,) the water is again put on, "topping" [covering] the rice for three days. It is then drawn down until the rows of rice are apparent. In twelve days after the field is dried and hoed twice, commencing as soon as dry enough. It will now be ready for the joint flow in about thirty days.

Some, instead of drying it at the end of twenty days, merely "slacken" the water, so as to show the tops of the rice, and increase the water as it grows, so as to keep the tops of the rice merely visible for sixty days.

Covered planting.—The following directions are given for this: The ground being prepared as above, sow and cover the rice, put on the water until the rice is "piped," dry it, and keep it so until in the needle state, cover it with water for ten days, draw it down until you can see the tops of the rows. Twenty days after dry it, and as soon as it is enough so, hoe it as often as possible before the joint or harvest water is put on, which will be in about from thirty to thirty-five days. When the joint flow is put on, the water is kept just below a white streak which is always seen on the stalks of rice just below the ear. When fit for harvest, (which is determined by the second or third lower grains being so soft as to be mashed with the nail,) the water is let in and out for several tides so as to wash out the fields entirely, which renders it less offensive (and of course less unhealthy,) while harvesting is being carried on. The task at this time is to cut a quarter of an acre and carry out a quarter. The quantity of seed used is two and a half bushels per acre. The usual average product is about thirty bushels per acre, the greatest average from fifty to sixty bushels. The largest quantity made, eighty bushels per acre. The usual weight of the rice is forty-seven pounds per bushel.—Ed. S. Agric.

WHAT WILL AN ACRE YIELD IN SILK?

From the Burlington Silk Record.

In 1838, M. Darcet published at Paris the 3d edition of his "Description of a healthy Cocoonery." In that work there is a memoir on the silk culture, written by M. Bourdon, a distinguished modern culturist, containing a variety of interesting facts and observations. In 1837, at the instance of the French government, he made a tour of inspection through the silk districts of France. He says, "In rearings regarded as of average goodness, the product per ounce of eggs is 25 kilogrammes of cocoons," (about 56 lbs.) He says moreover, that "in every ounce of eggs at least 26,000 worms perish," and that there are 40,000 in an ounce. This, it must be remembered, is the average result throughout France, as reported by an official agent so lately as only four years ago. The loss of worms, therefore, is nearly two-thirds, and yet the business continues to be the most profitable that exists in France. M. Bourdon further says, that there are cocooneries where the product of an ounce of eggs does not exceed 18, 22, and 35 lbs. of cocoons.

Now to prevent this enormous loss of worms, the most strenuous efforts of scientific culturists in France have been made. The *causes* of this loss are stated to be "the frosts of spring nipping the young leaves of the mulberry tree at the time of the hatching of the eggs, and to diseases by which the worms are destroyed." The evil has been cured, but not until "ten years of toilsome research" had been devoted to an investigation of its causes and its remedy—and ten years is a long time in these United States. The remedy was found in a most elaborate system of ventilation, watchfulness and care, of which *incessant cleaning* formed a most conspicuous item. This system was invented by Messrs. Darcet and Beauvais. It required an increased temperature, more frequent repasts, and constant renewal of the air of the cocoonery, by pumping it up into the garret, by machinery made for that express purpose. M. Bourdon confirms the natural conclusion of the reader's mind, by informing us that on this system of feeding, "the cares and attentions are multiplied; very frequent removals of the litter are absolutely necessary; the least neglect in the distribution of the repasts cannot fail to be attended with serious consequences." On the other hand, the solicitudes of the feeder are abridged, for the worms spin in about 22 to 24 days.

The results obtained from this elaborate system of feeding are as follows:

M. Beauvais got from	2240 lbs.	leaves	200 lbs.	cocoons.
At Faventines,	2240	"	171	"
Marquis of Balincourt,	2240*	"	132	"

* Leaves watery and not nutritious.

M. Thannaron.	2240 lbs.	leaves	168 lbs.	cocoons.
M. Robert,	2504	"	114	"
M. Mazade, jr.	2240	"	147	"
Misses Reina, Italy,	2240	"	240	"

The above crops were all obtained by feeding with the white mulberry.

Culturists in this country, when feeding small crops on shelving, have realized the following results :

D. V. M'Lean, Freehold, N. J., in 1838, from 2240 lbs. of leaves obtained 112 lbs. cocoons, and in 1839, from 2240 lbs. leaves 130 lbs. cocoons.

E. Montague, Belchertown, Mass., in 1840, from 2240 lbs. leaves 215 lbs. cocoons.

Besides these results, we may add the following, which are differently stated. It must be remembered that all the crops made in this country were fed upon the multicaulis.

Aaron Clapp, Hartford, Ct. in 1839, raised 50 bushels of cocoons, each producing one pound of reeled silk: he says 80 lbs. of leaves afforded him a pound of reeled silk.

M. Amans Carrier, at Rodez, in France, produced 928 pounds of cocoons from $1\frac{1}{4}$ acres of ground : he hatched $7\frac{1}{2}$ ounces of eggs.

M. Carlo Modena, at Vicenza, in Italy, in 1778, obtained 992 lbs. of cocoons from 26,475 lbs. of leaves ; also 55 oz. of eggs.

The loose and slovenly manner in which most of the rearings in this country have been conducted, prevents our giving the weight of leaves consumed and of cocoons produced, except in a very few instances. The careful noting down of all these things, as practised in Europe, is necessary at first, in order to reduce the silk culture to something like form and consistency. Our American culturists *must* imitate their careful precision, at least for a few years, until we can obtain some certain data on the most important points. We furnish above, the result obtained by seven European growers, specifying how many pounds of cocoons each one obtained from a ton of leaves. The Misses Reina obtained 240 lbs. It is well known that a bushel of pea nut cocoons will weigh 12 lbs. : hence these 240 lbs. are equal to 20 bushels. Now we know from repeated trial, week after week, that the clear average yield of a lot of pea nut cocoons is $1\frac{1}{4}$ lbs. of silk per bushel : indeed it may be more, and unquestionably will be when our reelers become less wasteful. Hence the 20 bushels afford us 25 lbs. of silk.

Now we know moreover, because we have tested it by actual experiment, that an acre of multicaulis trees will produce 10 to 15,000 lbs. of foliage the first season. The second season it will very probably produce 20,000. If then, as is really the case, 25 lbs. of silk have been already obtained, annually, for years in succession, by the Misses Reina, from a ton of leaves, the fact is beyond dispute that an acre of multicaulis trees will produce foliage enough to make 100 lbs. Of that part of the question there can be no doubt : the only doubt is whether our culturists will adopt all the lights that are before them as regards improved modes of feeding, and so *use* this foliage as to *make* it produce all the silk it is capable of yielding. Of their disposition to do so we entertain no doubt, when they once become satisfied that the lights held up to them to follow are not false ones. No effort of ours shall be spared to accomplish this : but at the same time our readers must assist us. They can be of immense advantage to us and to the country at large, by keeping careful accounts of how many pounds of foliage they feed out, and how many pounds of cocoons they make. We sincerely hope that this will be done the present season, and the result communicated to us for publication. Those who use our improved frames will generally do so, and we shall do it ourselves. Knowing already the quantities consumed and yielded in Europe, we have a distinct mark set up for us to equal or surpass ; and it will be strange indeed if our fine climate does not enable us to exceed the very highest European crop.

The large yield of 240 lbs. of cocoons from a ton of leaves is made with uniform regularity in all of the numerous cocooneries of the Count Reina in Italy ; and this result, though much exceeding the product of all other culturists, has nevertheless been regularly produced every season for a number of years. It is in fact equal to 100 lbs. of silk from an acre of ground. Four acres of multicaulis trees in this country would therefore become an independence to the father of a family. Nay, even one acre, producing this result, would be a fortune to tens of thousands of families. Most firmly persuaded are we that this will be found to be the case ; and that thousands of worthy, industrious men and women, with families dependent on them for support, who have been prostrated by the events of the last two years, will find this silk culture one of the surest sources of respectable support and comfort. How firmly, then, should all who think so, stand up in its defence, and persevere to the utmost of their means in implanting it securely on our soil. No matter how unnatural the opposition may be—and it is *truly* unnatural—yet perseverance is the word, and the blessings of thousands will descend with grateful acceptance on the heads of those who succeed in overcoming the obstacles which surround the business, while the additional satisfaction will be experienced of freeing our happy country from its servile dependence upon the fields, and filatures, and looms of foreign countries.

THE LONG CONTINUED ACTION OF CALCAREOUS MANURES, AND PARTICULARLY IN PREVENTING RUST IN WHEAT.

To the Editor of the Farmers' Register.

The following facts, communicated to me a short time since by a farmer of Augusta county, may prove interesting to the readers of the Register, especially those of the marl and lime-stone regions of the state. The facts are these, that in a field of wheat (the last harvest) which was very much injured by the rust, two small spaces escaped entirely, the straw being bright and clean and the grain plump. On one of these spaces a lime kiln was burned in the year 1810 ; since which time the field had been frequently cropped. On the other, the ashes from a distillery, had been deposited for several years ; the distillery, however, had not been in operation for 7 or 8 years. These spaces were, in all respects, treated

as the other parts of the field, and their being surrounded on all sides by wheat very badly rusted shows conclusively that the lime and ashes were the sole causes of the difference.

I hope the foregoing facts will be sufficient to induce some trials of the efficacy of lime and ashes in preventing rust, by those who have the means of doing so; the end in view is of sufficient importance to justify the labor and expense of many experiments. The quantity of lime and ashes, in the example related above, is much greater than can, or perhaps ought to be applied in ordinary cases, but the lime operated effectively after 30 years, and the ashes after 7 or 8. A much smaller quantity applied annually might produce the same effect.

As lime is an essential ingredient of *good* wheat soils, may not the many failures of the wheat crop be owing, in some degree, to the absence of lime* from most of the land cultivated in that crop?

The efficacy of lime, on what is called limestone land, is strikingly illustrated by the *accidental* experiment I have detailed above.

Lexington, Va. Feb. 20, 1841. WM. TATE.

P. S. In one of the volumes of the Transactions of the Philadelphia Agricultural Society, (I have not the work by me, and do not recollect the volume,) there is an interesting article on the causes of rust, which, if it has not already been published in the Register, I have no doubt many of your readers would be obliged to you for publishing.

OF THE SOIL MOST SUITABLE FOR APPLE TREES.

From the Western Farmer and Gardener.

The successful cultivation of the apple depends very much on the suitableness of the ground they are planted in. The size and flavor of the fruit, the general health and duration of trees are most commonly the result of good or bad soil. Climate and situation also affect both trees and fruit; but not in the degree in which the same are affected by the qualities predominant in the land. Of all the different descriptions of soil to be met with, that of a soft hazel loam, containing a small portion of sand, seems to be most congenial to the apple generally. In such soil the tree is seen to flourish longest, is most productive, and remains freest from disease or attack of insects. A great depth is not requisite; eighteen or twenty inches deep being quite enough, provided it be on a dry subsoil of gravel or loose rock. If the bottom be wet, the trees should be planted high, and every means taken to drain the ground. A wet bottom of gravelly clay should be avoided if possible.

Deep rich soils in sheltered situations are not the most proper for the apple, for it is often seen that apple trees succeed well in any kind of loam, though it be not more than one foot in depth, so as the bottom is sound and dry, the roots take on extensive horizontal range, the young wood is always of more moderate growth, and better ripened than when roots strike deep into the ground.

Although local circumstances often control the works of the planter, compelling him to fix on a site where the soil may not be exactly what is recommended above; he must, in this case, endeavor to make the soil by trenching, draining, and by addition of the qualities wanting, bring it as near to the standard as possible.

Situation and aspect for planting apple trees.—The situation of an orchard should neither be in the bottom of a narrow valley, nor on the top of a hill: in the first, the young wood is never so well ripened, the buds are often too early excited in the spring, and there frosts are always more intensely felt: in the second, fruit-bearing trees are always too much exposed to winds. The most desirable site is the side of a hill which slopes gently to the south east, that being the most sheltered situation in this western country. But when the violence of a west wind is broken by an intervening rise of ground, a south-west aspect has been found equal to any.

* Essay on Calcareous Manures. P. 61, 1st edition.

FROZEN WELL.

Near Owego occurs this apparent contradiction of Nature's laws, which is thus described, by a correspondent, in *Silliman's Journal.*

The well is excavated on a table of land, elevated about thirty feet above the bed of the Susquehanna river, and distant from it three-fourths of a mile The depth of the well, from the surface to the bottom, is said to be seventy-seven feet; but for four or five months in the year, the surface of the water is frozen so solid as to be entirely useless to the inhabitants. On the 23d of the present month, (Feb.) in company with a friend, I measured the depth, and found it to be sixty-one feet from the surface of the earth to the ice which covers the water in the well, and this ice we found it impossible to break with a heavy iron weight attached to a rope. The sides of the well are nearly covered with masses of ice, which, increasing in the descent, leave but about a foot space (in diameter) at the bottom. A thermometer let down to the bottom, sunk 38° in fifteen minutes, being 68° in the sun, and 30° at the bottom of the well. The well has been dug twenty-one years, and I am informed, by a very credible person who assisted in the excavation, that a man could not endure to work in it more than two hours at a time, even with extra clothing, although in the month of June, and the weather excessively hot. The ice remains until very late in the season, and is often drawn up in the months of June and July. Samuel Mathews drew from the well a large piece of ice on the 25th day of July, 1837, and it is common to find it there on the 4th of July.

The well is situated in the highway, about one mile northwest of the village of Owego, in the town and country of Tioga. There is no other well on that table of land, nor within sixty or eighty rods, and none that presents the same phenomenon. In the excavation, no rock or slate was thrown up; the water is never affected by freshets; and is what is usually denominated "hard," or limestone water. A lighted candle being let down,

the flame became agitated and thrown in one direction at the depth of thirty feet, but was quite still, and soon extinguished at the bottom. Feathers, down or any light subtance, when thrown in, sink with a rapid and accelerated motion.

Owego, Feb. 26th, N. Lat. 42° 10″.

Prof. Silliman, in attempting to solve this extraordinary and difficult problem, observes:

At the depth of more than sixty feet, the water ought not to freeze at all, as it should have nearly the same temperature of that film of the earth's crust, which is at this place affected by atmospheric variations, and solar influence, being of course not far from the medium temperature of the climate. Could we suppose that compressed gases, or greatly compressed atmosphere were escaping from the water, or near it, this would indicate a source of cold; but as there is no such indication in the water, we cannot avail ourselves of this explanation, unless we were to suppose that the escape of compressed gas takes place deep in the earth, in the vicinity of the well, and in proximity to the water that supplies it. Perhaps this view is countenanced by the blowing of the candle at the depth of thirty feet, blowing it to one side, thus indicating a jet of gas which might rise from the water as low as at its source; and even if it were carbonic acid, it might not extinguish the candle, while descending, as the gas would be much diluted by common air; and still, in the progress of time, an accumulation of carbonic acid gas might take place at the surface of the water, sufficient to extinguish a candle.

HEAVY BERKSHIRE HOGS.

From the Kentucky Farmer.

[Here are some facts that tell well for this popular breed of hogs. If the breeders in various sections of the country would report the *facts*—kind of keep, age, &c.; in reference to the various breeds of animals, the country would soon be able to estimate the improved breeds by an intelligible standard. There has been a vast deal too much puffing and blowing about all the breeds in certain agricultural papers. It is time these humbugging appliances were laid aside for the more honest and more useful statements of ascertained truths. If ever this paper sinned in this way hitherto, it will sin no more. We are devout believers in the superiority of various breeds of domestic animals and shall use every legitimate means of furnishing the public those grounds of enlightened opinion which will tend to their greater diffusion; but from this day forth, be it fairly known to all concerned, we shall admit no article in this paper which is a mere puff or advertisement in disguise, of this, that, or other breed. But we shall feel at all times thankful for the *facts* on which a preference for any breed is based by the writer.—Ed. Ken. Far.

Mr. Editor.—If you think the following facts in relation to some of the weights of our Warren county hogs are worth publishing in your valuable paper, you are at liberty to do so.

Mr. Geo. Deyche slaughtered a lot of 40 half blood Berkshire hogs 18 months old, with no grain during the summer months, their average weight net was 304 lbs. Mr. Steddom's lot of 38 three quarters and seven eighths Berkshires 16 months old averaged 343 lbs. net. All his choice pigs having been selected for breeders, fed solely on grass during summer. Mr. Ebenezer Hathaway's lot of 10, half Berkshire, at 20 months old averaged 373¾ lbs. net. Mr. Hathaway gives it as his opinion that it cost him no more food and attention to bring his hogs up to the above weight than it did his old stock to 250 lbs. at the same age. Mr. Gallagher's lot 65 hogs half Berkshire, from 14 to 18 months old, fed solely on grass during summer, averaged 309 lbs. net. Mr. Longstreet's lot of 55 head averaged net 318 lbs—all the choice pigs were sold for breeders; no grain until he had harvested his oats and wheat, then run in the stubble, &c., were from half to three quarters bred Berkshires, with a cross of the Irish Grazier, &c. Mr. Tache of Springborough slaughtered a barrow 30 months old, half Berkshire, gross weight 900 lbs. net 814 lbs. Mr. Samuel Irons who denied the further improvement of his hogs, being prejudiced against not only Berkshire hogs but Durham cattle, &c., was induced by the persuasion of his son to send a sow to his Berkshire boar, selecting his poorest with design evidently to disgrace the stock, the sow had nine pigs; Mr. Irons sold two of the best for breeders, the other seven at 20 months old, averaged net 435; his old stock, with *precisely* the same food and attention, as they were fed together, did not average as much by just 102 lbs., although six weeks older on each hog. This may seem to border on improbability with some, it is nevertheless true, as can be made to appear. Mr. Lefevre slaughtered a lot of 5 half Berkshire pigs farrowed 17th March 1840, average at 253 lbs. net; one weighed 290 lbs. Dr. Keever's lot of 6 or 8 March pigs (the choice ones sold for breeders, (averaged 260 lbs.)

The writer of this article bred a big thorough-bred Berkshire, got by Mr Lossing's imported boar Newbury, out of sow bred by the society of Shakers near Albany, N. Y., that at 5 months and 5 days old weighed 185 lbs. gross. M. B.

Lebanon, Ohio, Jan. 16, 1841.

AN ACCOUNT OF THE METHOD OF PLANTING AND MANAGING PEACH ORCHARDS,

As practised in New Jersey. By T. Hancock, Nurseryman, Burlington, N. J.

From the Magazine of Horticulture.

The peach tree is very extensively cultivated throughout New Jersey, and large quantities of the fruit are annually sent to the New York and Philadelphia markets. Since the opening of the communication by rail-road between these two cities through the interior of the state, it has been the means of greatly increasing the number of peach orchards, and many large and extensive plantations have been made. Within a few years, from the increased facilities of rapid and safe transportation by rail-road, between Boston, Providence, and Stonnington, the eastern cities have been supplied, to a very great extent, with New Jersey peaches, and the opening of such a market has induced cultivators to plant more extensively, in order to supply the demand. The crop proves a very profitable one for the light soils of a portion of the state, as the trees flourish

very well where the land is not sufficiently good to produce but a very few bushels of corn to the acre.

If the few following remarks, in relation to our mode of cultivating the peach, will interest your readers, you can give them a place in your pages. I have an orchard of some extent, and have, in some seasons, gathered a very large crop.

When it is intended to plant out a good orchard of trees, we generally select an elevated position, entirely unprotected by any timber or shelter of any kind: if a situation can be selected near the bank of a river, the crop is more certain, as the trees better withstand the frosts, which occasionally do much damage.

Plough, and put the land in good condition for corn or vegetables, and plant the trees twenty feet apart each way. Continue to till the land, taking off a crop of peas, beans, potatoes, or something that does not grow too high: wheat, rye, and oats are very injurious, and should not be planted. The land must not remain without tillage, as the trees would soon be injured; indeed nothing will kill a fine peach orchard sooner than to let it lie in sward.

The trees should be two years old on the stock, (from seed,) and one year from the bud, (the year after budding.) This is considered as the best age for transplanting. If the water stands near the surface of the soil, or if the land has springs near the top of the ground, I should not deem it advisable to plant with the expectation of very certain crops. I have lost two orchards planted in this manner, while, in an adjoining field, where the land, or a part of it, was high, with a dry subsoil, the trees flourished, and produced abundant crops.

Light sandy soil, or light loam, we consider the most preferable for planting out peach orchards, and I should judge, that on many of the elevated knolls, in the vicinity of Boston, the peach might be cultivated to good advantage, particularly the earlier varieties. It is at least well worthy of trial. Yours, respectfully, T. HANCOCK.

Burlington, N. J., Jan. 1841.

We have already noticed Mr. Hancock's nursery, and given some account of his peach orchard, (Vol. V., p. 365.) In the season of 1839, when we passed through Burlington, the peach trees were breaking down with the heavy crops. Mr. Hancock's trees were literally loaded; and so fast did they ripen, that the ground under nearly every tree that we noticed was covered with the fruit. The orchard contained about seventeen acres, and was covered with healthy trees, and the crop was estimated at two thousand baskets (about fifteen hundred bushels,) which commanded one dollar and upwards a basket, in the New York market. The land was a light sandy loam, and would not produce, as Mr. Hancock informed us, five bushels of corn to the acre, unless very heavily manured. The ground was not planted at all when we saw it, but it had been tilled with the cultivator, to keep the surface free from the growth of weeds, &c. The trees do not make a vigorous growth, and consequently do not need but little pruning.

The great error in cultivating peach trees, in New England, has been in planting them in too rich soil, and encouraging them to make a rapid and vigorous growth: the trees, in consequence, are overtaken by the cold weather, and the severe frosts, of the early part of winter, before the wood is fully ripe, destroy the young fruit buds, oftentimes the young and tender shoots, and occasionally the trees are killed completely down to the roots. The very opposite course should be pursued: the trees should be set out on a light soil, and not encouraged to make a vigorous growth; the young wood will then get fully ripe, and hardened before cold weather; the frost will have less effect upon the buds, and, unless the situation is very unfavorable, and subject to late frosts in the spring, the chances are that the trees will not be injured, and will produce good crops.

The cultivation of the peach has attracted more attention, within a year or two, in the vicinity of Boston, than for some time previous: to those who are planting trees, we would recommend a perusal of Mr. Hancock's communication, convinced, from the success which has attended his cultivation of the trees, that the information which he has given will be found the result of experience upon the subject.—*Ed. Mag. Hort.*

THE SUGAR BEET AND WHITE CARROT. MR. RONALDSON'S IMPORTED SEEDS AND IMPLEMENTS.

Philadelphia, Feb. 16, 1841.

Dear Sir.—Your Register of the 13th shows your labors are not lost, and that of the seed you have sown, some has fallen on good ground. The more the sugar and other beets are cultivated the better their value will be understood, especially if they suit our warm southern districts. I asked a lady, to whom I had given some sugar beet seeds, and persuaded to sow a large quantity of them, (the farm was on the western shore of the Chesapeake,) if the negroes stole them. To which she replied "Oh, no, no," and I rejoined, "I am sorry for that, as it is a proof that though you have quantity, they must not be of good quality." "By no means," was the reply, "they, (the negroes) have no occasion to steal them; they would do it, but we give them beets, and some of them are fond of roasting them. We have to feed them, and beets go in for a share in doing this. No, no,—our negroes shall not have occasion to steal beets, that they may eat them, they will eat, and beets are cheap, but I do not wish them to know this."

My object in writing is to inquire, (for I have no memorandum of what I sent,) was white carrot seed amongst what were sent to you; if so, have you learned what was the success in your warm climate? They have grown to a surprising size here, are good for the table, and carrots have always been celebrated as fine feeding for horses. This white carrot is to the common carrot, what the mangel wurtzel is to the other beets. It grows considerably out of the ground; and an observing friend of mine thinks, in some circumstances, may give a heavier crop than beets. If so, then it would be of more value from the circumstance of the carrot being far the most solid of the two.

I sent you a small pamphlet noticing the things I had brought from Europe, and giving

the reason for bringing them. Do you think spring barley on good land would be a paying crop with you? Of it, the oats, sugar beet, and rye grass, I brought considerable quantities, and presume all of them are to meet a market this spring. The red wheat, the quantities were but small, a sack containing 4 bushels of the "golden drop," has been lost. This, independent of the value, I am sorry for, as it is amongst the reds I have been looking for that which is not to be so subject to blight or mildew as some we at present have.

While we were speaking of beets and carrots for the table, we might have noted that vegetables and fat meat are proper associates; the one is an accompaniment that the other wants, and together are healthy, nourishing, and more fattening than pork or greasy meats by themselves.

Advise your readers to follow the practices of the farmer in other countries; you can tell them that it is not by accident they have fine oats, wheat, barley, &c. It is the result of great care and skill. If our farmers exercise the same means, the seed of the country may be improved, and good imported be preserved from degenerating.

Yours, sincerely, JAMES RONALDSON.

P. S. With respect to sales, I leave every one to judge the propriety of buying expensive seeds. Of my own opinion, they have evidence in my taking trouble to place them within reach of farmers.

[The pamphlet referred to above was received; the notice at its end will be copied below. It is scarcely necessary for us to repeat here that Mr. Ronaldson's efforts to introduce new and choice seeds, and agricultural implements, have been induced solely by the desire to aid agricultural improvement, and promote the public good. We regret that circumstances, beyond our control, prevented this notice appearing in the February number.

In answer to the inquiries, we have to state that there were no seeds of the white carrot among those which Mr. Ronaldson sent to us last spring for gratuitous distribution. Barley is sown no where in Virginia except on the celebrated Gloucester low-grounds; and even there, that crop had been abandoned by all except John Tabb, esq., of Whitemarsh.—ED. F. R.]

To the farmers of the United States.

The subscriber has imported, and for sale, a small quantity of Oxford White Prize Seed Wheat; Pomeranian Red do.; Golden Drop do; Scotch and Chevalier (spring) Barley; Hopeton Oats; English Rye Grass; Don Potatoes; Weed Hooks, (a specimen) to make by; a Mill for family use, for the inspection of tradesmen and farmers; Great Northern Rye; French Sugar Beet. And has in the ship Levant, daily expected, Calico Potatoes, and Forty-fold do.; Scots Rye Grass; Subsoil Plough, chain and draft bars, for inspection, &c.; Weed Hooks, do.; Bull Ring, do.; Safety Lamp, do; Iron chairs, for sale and inspection.

Neither expense nor labor has been spared to get all these things good of their kind. This will considerably enhance the price, but it is in farming as with other business, the trouble and expense has to be encountered, otherwise the experiments would never be made. The Sugar Beet is now ascertained to be a valuable acquisition, and if any one of the other articles shall prove equally advantageous to our agriculture, it will amply repay the trouble and expense that has been bestowed on the whole.

It is proposed to accompany these seeds with a brief notice of their respective properties, &c. Gentlemen having occasion to write to the subscriber, are respectfully requested to pay the postage. JAMES RONALDSON,

No. 200, *South Ninth street, Philadelphia.*

LIME.

From the Farmers' Gazette.

In the Geological Appendix to Cleaveland's Mineralogy, it is stated that in the alluvial region of North Carolina "a bed of limestone and shells commences about 20 or 30 miles from the border of the primitive [formation;] to which it runs parallel, through S. Carolina, Georgia, &c." The border of this primitive formation crosses the rivers near the first falls; that is, not far above Fayetteville, Cheraw, Camden, Columbia &c, and of course the bed of shells and limestone referred to by Professor Cleaveland runs nearly parallel with a line drawn through these towns and about (or more probably as we suppose somewhat more than) 30 miles below. To the great reproach of the states through which this bed runs little has yet been ascertained as to its purity, or its extent and depth. A specimen from the neighborhood of Darlington C. H. was analyzed by the late Dr. Cooper and found to be marl; but the extent of the bed is not known. About 20 miles below Darlington C. H. near Jeffries' creek, where it is crossed by the road leading to George Town, is a bed of limestone, which, by burning, furnishes lime that answers for mortar. In other parts of Marion district, on the same side of the river, limestone has been found, and the Pee Dee runs across several beds of it between the mouth of Jeffries' creek and the mouth of Lynch's creek.

These facts would seem to indicate that lime may be obtained so near the Pee Dee as to be available for manure on lands near the river. The reason why the beds of limestone referred to have not hitherto attracted more attention is that the value of lime as a manure is not understood by our planters. We have not turned their attention to it ourselves because we were not aware, until recently, that the beds were as extensive as we now learn they are. We shall henceforth, from time to time, occupy some space in our columns with the subject. This week we give one article of some length and two shorter ones containing facts suited to inquirers. Read them.

The same bed of limestone and perhaps marl, may doubtless be found on the Santee and Cape Fear, as well as probably on Lynch's Creek, Little Pee Dee and Drowning creek. In most of the intervening country it may be too far below the surface to be dug up with profit. Marl has been found on the Santee.

REMEDY FOR KIDNEY WORMS.

From the Maine Farmer.

I cured swine of the disease called "kidney worm," by making an incision with a knife, on each side of the back bone, and applying spirits of turpentine to the wounds and along the small of the back. It may also be cured by giving red pepper in their food; taken in season it readily yields to treatment.

ESSAY ON THE CULTIVATION OF TOBACCO, AND THE MANAGEMENT OF THE PLANTATION.*

By a Maryland Planter.

From the American Farmer.

The illustrious Thomas Jefferson, in his Notes on Virginia, in making a comparison between the culture of tobacco and wheat, has remarked, that the culture of the former "is productive of infinite wretchedness. Those employed in it are in a continual exertion beyond the power of nature to support. Little food of any kind is raised by them; so that the men and animals on these farms (tobacco plantations) are badly fed, and the earth is rapidly impoverished."

These remarks are applicable, in many instances, to the management of tobacco plantations of the present day. Many planters make every exertion to raise all the tobacco they can, without paying proper attention to any other crop. In the management of a tobacco plantation, such a course should be followed, as will produce the greatest quantity of food for animals, with the least labor. Attention should be paid to the growing of artificial grasses; for they not only furnish food for animals, but they likewise make manure for the renovation of the land made poor by the culture of tobacco. Therefore, a planter who has swamp land, ought to make every exertion to reclaim it, and a more useful crop to him, he could not put in it than a crop of timothy. Even if a planter has no swamp land, he ought to put some of his upland in timothy, or some other of the longer grasses. It is true he should always have all the arable part of his plantation set in clover or some other of the grasses, except the part cultivated in corn and tobacco. That is, clover should be sown to improve the land, and ought not, unless in the richest spots, to be cut off. Besides, clover cannot always be depended on for hay, for if the season should not exactly suit it, it will not grow high enough to be cut and saved, whereas it is not so much so with the other grasses.

The growing of wheat, rye, and oats also, furnishes food for men as well as animals, but a crop of small grain interferes materially with a crop of tobacco, particularly at the time of harvesting the former. About this time the crop of tobacco is in most need of hoeing and ploughing; grass at this season grows rapidly, and by dividing the labor between the two crops, both suffer, the grain is poorly taken care of and the fields of tobacco frequently become set with grass like a meadow. A crop of tobacco is never so good as it would have been, if permitted to get in the grass shortly after the plants have been transplanted. Indeed I have seen some fields of tobacco entirely ruined by having been in the grass; although hoed and ploughed, the land had become so full of the litter from the grass and its roots, that the tobacco plants never would grow afterwards. So that in cultivating of tobacco the greatest care should be taken to prevent the crop from getting in the grass. I have always thought, that where a planter looked to his tobacco crop for his profits, if it was not for the making or raising of provender for his live stock it would be much better for him to raise no grain except corn. As a plantation cannot be carried on without animals on it, it becomes necessary that some small grain should be raised. It must be kept in mind, that I am not writing about a mixed crop, where tobacco and grain might be both looked to for the profits of the plantation, that is, where there might be a certain quantity of grain, as well as tobacco raised without the one interfering with the other. I am writing as if a crop of tobacco was always the more profitable crop, and recommending such management on a plantation as will obviate as far as possible the remarks of the illustrious man quoted at the beginning of this essay.

In Prince George's county, Md., where the cultivation of tobacco is brought as near perfection as in any other part of the world, a well managed plantation is conducted in the following manner (so as to improve the land and counteract the tendency of the tobacco crop to impoverish it.) The land that has been worked in corn and tobacco during the year, is in the fall sown in wheat or rye, or a part kept for oats; in the ensuing spring the whole is put in clover. The grain and clover is plastered in April. By this mode of management a planter has fresh fields out of clover every year for corn and tobacco. The plantation of course is fenced in such a manner as to give the requisite number of fields. During the year there is as much manure made as can be, without its interfering with the crop of tobacco. The manure is used on parts of the tobacco field that will not so readily improve by the use of clover and plaster. By this manner of management, lands that are adapted to clover and plaster, are improved and kept in a state of great fertility.

It is almost useless to say, that all agriculturists should make and save all the manure they can. Yet in the cultivation of tobacco there is a peculiar necessity; for tobacco grown on land that has been cultivated the year before it is put in tobacco will, if sufficiently manured, bring tobacco that will cure finer, and consequently, be worth more money when carried to market. Tobacco to cure fine must grow rapidly after it is planted, which it will not do if there is much litter in the ground (B.) Lands taken out of clover and put in tobacco, frequently have so much litter in them, that the tobacco grows very little until September: consequently the tobacco has not time to ripen, but if it should, it will have so much juice and be so late in the fall, that it will cure a dark color, and will be such as is not much in demand in foreign markets (C.) Whilst I am writing on the advantage of saving manure on a plantation, I will give the management of one of my neighbors, as the saying is, when he commenced the world. His plantation contained about fifty acres of land, about fifteen of which

* See Note A.

were swamp. The balance consisted of north hill sides, and not more than two thirds of them could be cultivated, and even that little had been worked down so that it would grow nothing but sedge. He had two slaves besides himself. He went to work, reclaimed his swamp land with a great deal of labor, and divided his plantation into two shift. He then commenced cropping by putting either shift of meadow alternately in corn. During the summer and fall he had all the weeds and grass that grew about his ditches and fences, or any other place where they could be had, cut and hauled in a heap to rot for manure. In the winter his cattle were sheltered and penned and also during the summer they were penned at night. In short, he saved in every way all the manure he could. In this manner he made manure enough for all the land which he cultivated in tobacco. He did not make any kind of grain but corn; for whilst he had one part of his land in corn and tobacco, he had to keep the other for a pasture for his stock. Thus he made his swamp land grow corn for his family and provender for his stock, and at the same time furnish manure to enrich his worn-down upland. Such parts of his swamp as were too wet for corn he kept to grow branch grass. These places furnished him with hay. His plantation, as I have said before, was too small for him to raise small grain, so he could sow no clover nor any other kind of grass. If he had been so situated as to have grown timothy, how much better he might have carried on his manuring system; but even as it was he soon became famous for his nice crops of tobacco. So much so, that I have known him frequently to sell his crop of tobacco for two or three dollars per hundred weight more than his neighbors. He has frequently sold it before it was carried to the house. One great cause of the fineness of his tobacco, was his manuring the land with well rotted manure. It is true he is a nice person in curing and packing tobacco. But it may be set down as an incontrovertible fact, that unless tobacco grows on suitable land, and is properly managed before it goes to the house, it will not cure of a nice color or make what is termed fine tobacco. Well, by the management of my neighbor, as here given, he has maintained his white family, and reared a considerable family of slaves, (for one of the slaves as before mentioned was a female.) From fifty acres he has enlarged his plantation to between two and three hundred acres, on which he has at present four fine tobacco houses. When he first commenced the world, he cured his tobacco in a pen, rudely constructed of poles and forks, and covered with marsh grass. I have thus given the management of one who ranks high as a planter, not that he would not have sown grain and clover if he had had sufficient quantity of land to have done so, but to show what may be done on a plantation by manure. Any planter, whose plantation is adapted to the growth of clover, should by all means grow it; for it not only improves the land, but makes such luxuriant pasture for stock. There are lands that are too poor to grow clover. My neighbor's management, especially where tobacco is depended on for the principal crop, ought to be followed closely, for it is only by manuring that this kind of land can be made to grow tobacco.

There are various opinions among planters about the best time to plough up land that is set in clover that is intended for tobacco. Some think the fall of the year best, others think the spring the best, because the land being exposed during the winter to the hard freezes, looses some of its fertility. My own opinion is, that land that has been pastured closely should not be ploughed up out of the clover until late in April, and the stock should be kept off the clover from February, so as to permit it to grow two or three inches high. Clover, in a young and growing state, turned in by the plough, soon rots and considerably improves the land.

Land broken up late will require but one more ploughing before it is laid off for to make the tobacco hills; whereas, if it is ploughed up early in the spring it will be necessary to plough it over twice before the tobacco is planted. When land that is intended for tobacco has a great deal of litter on it, I think it best to break it up, either in the fall or early in the spring. I always, when my tobacco land is rich enough, cut the clover for hay if I can do so, if not, I try to pasture it closely; for, if the land should not be quite as rich as it ought to be, the clover hay furnishes manure which goes back to it. For, as I have before remarked, tobacco will not grow quickly on land that has much litter in it. (D.)

A planter, in laying off his tobacco lots, should select such parts of his plantation as are adapted to the growing of fine tobacco: all light soils are of this description. Almost any soil may be said to be adapted to the growth of tobacco that will grow it quickly. Tobacco that grows off immediately after being planted is soon ready for the house, and the consequence is, it will with proper attention cure good. (E.)

I shall close my remarks on the management of a tobacco plantation in as few words as possible. In the first place, raise such crops as require the least labor for the support of the men and animals on it. In the next place, save all the manure you can; keep no more stock than is necessary for the use of the plantation—particularly horses, for a few well fed horses are of more use than a host of ill fed, half starved things. Suffer no manure or tobacco stalks to lie about your barn sills, when your land is in want of manure. Try and make corn enough for your own use. Keep the plantation in good fences.

Having made the foregoing remarks on the management of a plantation where tobacco is the only crop made for sale, I shall now proceed to make such remarks on the cultivation of tobacco as I think are calculated, if followed, to produce a good and fine crop; and in making my remarks, I shall treat the subject pretty much as if writing for a person unacquainted with the manner of growing tobacco.

I shall begin by giving directions how to choose suitable land and places for beds. The best situation for a plant bed that will grow plants early is on a hill side, having a slope towards the south, and if the land suit, the bottom or foot of the hill side is best. This situation fully exposes the bed to the 12 o'clock sun, and keeps off the northwest winds, which are frequent and cold during the spring months. I always select places for beds on the margin of running streams if the land suits. The running water keeps the tobac-

co flies away on that side, and furnishes water to put on the bed in very dry weather. I have frequently watered tobacco beds with great advantage. The water can be thrown over the beds a considerable distance by means of any thing in the shape of a common scoop with a long handle. All the parts of a bed that can be reached by the water thrown out of the scoop are soon watered. The part that cannot be reached in this manner, can, as the water is convenient, be soon watered by taking the water out of the branch and carrying it and putting it over the bed. Swamp beds may also be watered in dry weather, and the plants made to grow much faster in this manner. (F.)

In choosing land for a tobacco bed, a planter should be careful so as not to take that which is likely to *sponge*—that is, land that dries quick after a rain; for, in this kind of land the tobacco seed will not come up so well, as the ground very frequently dries below the seed after they have sprouted, and consequently kills them. The best kind of land is that which is well covered with vegetable mould.

Almost any land or situation would answer very well for beds if it was not for the tobacco fly: hence the great importance of choosing places for beds where the flies are not so likely to eat. Flies frequently eat worse in some places than they do in others. I have found them to eat worse in small pieces of woods where beds had been sown in succession for a number of years. They are not so apt to eat in places, distant from other places, where beds have been sown or tobacco has been grown. I have always found the first situation that I have mentioned the best, on account of flies; that is, a place not exposed to the northeast or northwest winds. It is a fact that has been long known to tobacco planters, that the flies eat worse during the prevalence of cold northeast winds, than at any other time: hence they do not injure beds in warm so much as they do in cold situations. Another thing is, the plants grow faster in warm places, and are sooner out of their way. As yet, I know of nothing that will prevent flies from eating when once they have gotten in a bed, nor do I know of any thing that will kill them. Many experiments have been tried, but with little or no success. I have known persons to sow sulphur on their beds. Others have sprinkled over them the juice of common elder leaves. Some I have known to sow rye flour on their beds, under the impression, that the flour, by forming an incrustation on the plants, prevented the flies from eating. Some suppose that keeping the beds covered with pine brush keeps the flies away. If any covering is of any advantage, it is a covering of well rotted stable manure put on very carefully so as nearly to cover the plants, without covering them entirely up. I have found some advantage from enclosing the beds with a watting of pine or cedar brush. This kind of fence around beds, whilst it fences them in from the intrusion of stock, prevents in some measure the flies from getting in them from adjacent lands. Some have supposed that a tight plank fence around beds would prevent flies from getting in them, especially if the plank was tarred: as this mode would be attended with considerable expense as well as labor, it is not likely to be adopted even if found to be a preventive. In very large pieces of woods, the flies are not so likely to injure plants. But at the present day the woods are so cut down that many planters have no such places. After all the experiments that have been tried, with respect to flies destroying tobacco plants, the situation of the bed has been found to be of more consequence than any thing else; that is, places where the flies are not likely to be. I have been rather tedious on choosing suitable places for planting beds; for I consider, that upon these in a great measure depends the successful growing of a tobacco crop. (G.)

Almost any kind of soil or situation might be made to grow plants, were it not for the flies. These little insects are the greatest obstacle to the culture of tobacco. If it was not for them, the cultivation of tobacco would be as successful as any other culture.

The best and surest time to sow plant-beds in upland, is about the middle of March. Beds sown at this time will produce more plants, and require less picking or weeding to keep the grass and weeds out. There are several objections to the custom of sowing seed in the winter months. One of them is, if there should be a warm spell of weather shortly after the seed are sown, they will come up too soon and are likely to be killed by hard freezing weather. Another objection is, the beds, from having been propared too early, become so hard before the warm weather commences in earnest, that the plants will not grow kindly. The plants also frequently come up in a sickly state, and very often remain so. Whereas, beds that are sown in March, from having been lately prepared, grow the plants off quickly. The seed comes up quickly and in a healthy state, and the plants are not injured by drought, as much as they would be had the beds been prepared in the winter. The best time to sow lowland beds is about the first of April. (H.)

In preparing of plant-beds, it has been the custom from time immemorial to burn them over with brush or wood. This no doubt is the best way where it can be done. It certainly is best to burn a place that has not been used for a plant-bed for several years before. But a bed that has been sowed the preceding year, will grow plants without being burned again. A planter who is scarce of stuff to burn his beds with, many obtain a great deal of briers and brush by clearing up early his land intended for corn and tobacco that year. I have frequently burned beds with briers and leaves. Briars can be put in a cart with a pitchfork and put over the bed with the same. Beds, before the seed are sown, should be well pulverized and cleared of all root or other litter. When sowing the seed it is best to sow one half the seed intended for the bed, and then rake them in the ground. The other half of the seed should then be sown across the way the others were sown, and the bed then *trod* or *patted*. By this mode of sowing seed the bed is prepared for dry or wet weather; that is, should the weather be dry the seed raked in will come up; if the weather is wet both sowings will come. The surest way to have plants is to sow plenty of seed in a bed. It is true, beds will be better with a certain quantity of plants in them but as plants are liable to be destroyed in so many ways, it is surest to sow *thick*. A great many plants are destroyed by

picking the grass out of the beds. Besides, thick sowing is a great security against the flies. Beds that are thinly set with plants are soon cleaned when the flies get in them; whereas, beds thickly set may be considerably eaten by flies, and yet plants enough left: hence the trite saying "sow some for fly, and some for I." I have known persons to miss planting their crop of tobacco by not sowing seed enough in their beds; but I never knew one to miss by sowing too many. Beds that have too many plants in them can be raked and the plants thinned. This has for a long time been customary. A rake for the purpose is soon made. I have made the teeth with twenty penny nails.

Plant-beds, if the land is not rich, should be manured, this can be done before the seed are sown or afterwards. If the land is poor it is best to manure the bed before it is sown. Any well rotted manure will answer, but stable manure is best. Ashes answer very well for light soils, and have the advantage of having no grass seed in them. In saving manure for plant-beds, care ought to be taken to prevent grass seed from getting with it; so that stable manure, to be free from grass seed, ought to be saved when the horses are not turned loose out of the stable, and when they are fed on some kind of food that contains no seed. Corn-blades are one of those kinds of food. Hen-houses and the roosts of poultry furnish good manure for tobacco beds. Hog-pens also furnish very good manure for plants. When beds are manured after the plants are up, the manure should be put on in a very fine state. (I.)

It is a custom with many planters to cover their beds after they are sowed with pine or cedar brush. This is a very good way to get the plants up, as the brush keeps the land moist. The brush should be taken off the plants soon after they are up, as it makes them tender and what is termed *long-legged.*

To keep up places for tobacco beds from year to year, as soon as they are done with for that time, they should be hoed or wed up, and then covered with straw or tobacco stalks, three or four inches deep.

I now come to the transplanting of the plant. Having kept the land in which they are to be transplanted clear of too much grass and weeds it is now to be got ready for making the *hills.* The ground should be ploughed over, and if it should be *soddy* or lumpy, a heavy tooth harrow should be run over it. It is now ready to be laid off, which is done by running furrows from two and a half or three feet apart one way, and then turning and running furrows the same distance apart directly across the others, at what may be termed right angles; these furrows should be very shallow. Deep furrows make the hills too high, and when they come to be worked away the plants are left standing as if they were in pinnacles. When making the hills, the top should be rounded off, so that the pat of the hoe will be no lower than any other part of the hill. This, though seemingly of little consequence, is more so than it appears to be at first sight. In times of heavy rains it prevents the water and sand from settling about the plant. Very often when plants have only been planted a day or two, there are heavy rains. If the hills are not made so that the water can run off immediately, the plants get covered up by dirt washing over them.

When drawing the plants from the bed they should be drawn with as much of their roots as possible. A common table fork, by being run under their roots, enables a person to draw the plants with all the fine fibres to their main root. This mode should not be resorted to until the beds have been drawn several times, as the fork is apt to loosen the earth about the roots of the plants left in them, and consequently injures them; but towards the latter part of the planting time, when they will not be much longer wanted, the drawing with a fork will cause the late planting to grow off immediately. For plants drawn in this way, will, by leaving all their fine roots commence growing much quicker after they are transplanted, than plants will which have been drawn by hand. Plants that are used to replant with should be drawn in this manner.

When the plant-beds are within a short distance of the tobacco land, the plants should be carried to it in baskets or tubs that will not hold more than a bushel; for by carrying them in large baskets they become bruised. The most convenient way is to haul them in a cart; but this way bruises them. The best way to manage when the beds are not too far off, is to set the most careful hands on the plantation in the beds drawing plants, while the smaller and less useful hands should carry the plants to those who are planting them.

When setting the plants in the hills, care should be taken not to put more of the plant in the ground than the root; that is, the plant should be set as near as can be as it was in the bed. By putting the plants too deep in the hills, they frequently stand some time and then rot off at the root; if they should not rot off they will not grow for some time.

After the plants that have been transplanted have commenced growing, or in the language of planters, taken hold of the hill, weeding time commences. It is well not to weed tobacco too soon after it is planted; for if most of the grass seed do not get up before the hill is taken away, they will come up after the tobacco is wed out, and it will have to be wed again. But on the other hand too much grass ought not to be suffered to grow about the tobacco hills. For filth is thought to be the means of producing what is called the web-worm which is sometimes very destructive to crops. Many planters are of the opinion that weeding away the hills in a short time after the plants are planted, will prevent the web worm from getting in the crop. I have known some to have all the grass carried out of their tobacco ground when their crop had become grassy) under the impression that that would prevent the web-worm. This is a very good way; for grass left in tobacco lands, even if it is no cause of web-worm, prevents the tobacco from growing kindly. When tobacco is being wed, too much of the hill should not be taken away, as it leaves the plant standing on a small spire of earth, and in dry weather exposes the root too much to the sun. Some planters always weed their tobacco plants without running a plough or cultivator in the space between the hills, because the plough and horse sometimes knock out of the hills some of the plants. This is a very laborious way, and a great deal of labor is lost. I have always found the most labor saving way to be, to weed, when the tobacco

ground is not very grassy, around the plant only, and afterwards plough the land by running two furrows between the plants each way. While the plants are young, if the ground does not get too grassy, I do not plough until the tobacco makes some growth. If the land should become grassy soon after the tobacco is planted, the ground should be ploughed by running too furrows in each row, and should be wed afterwards across the way it was ploughed.

After tobacco has been wed out some time. it is very often necessary to go over it again with the hoes, and take from around the plants grass that was left by oversight. This should be done without taking away any earth from the plants. Two ploughings are enough for tobacco after it is planted. A cultivator should be used afterwards. When tobacco begins to cover the ground in which it is planted pretty well, it should be *laid by;* then it should be gone over again with the hoe and a hill put to it. Hilling tobacco is not absolutely necessary; for I have seen fine crops that were not hilled. The most advantage of hilling is, it keeps the tobacco from blowing down in storms.

There are two kinds of worms which have not been mentioned in this essay; either of which are at times troublesome to tobacco growers: the common ground-worm and the tobacco or horn-worm. The ground-worm is troublesome to early planted tobacco. I know of no way to get rid of this kind of worm only the old one, and that is to hunt around the plants and kill them.

This worm never cuts much after the 10th day of June; about this time they appear to have had their day and disappear. The horn-worm is troublesome from the time of planting a crop of tobacco until it is housed. A large gang of turkeys manage this worm pretty well. When the turkeys cannot manage these worms, they must be pulled off the tobacco and killed.

I will suppose the crop *laid by*, and that the next stage has arrived; that is the *topping* of it. There are two opinions about which is the best time to top. One opinion is, that the tobacco will cure a better color if the plants are permitted to get out in full blossom before they are *topped*. The other opinion is, that tobacco should be *topped* as soon as it shows an inclination to flower, or in the language of planters as soon as it *buttons*. I think it should be always topped as soon as it shows a button, for the growth of the top takes from the plant of tobacco so much that would have gone to it had it been topped early. The same remark applies to succors that grow between the leaf and stalk. They should be taken out early; that is, they should not be permitted to grow large, for they take away much from the leaf which at this time is making its principal growth. (J.)

After a crop of tobacco is *laid by*, that is, after it is ploughed and hoed enough, there are from three to five weeks before it is ripe and ready to go to the house. During this time, a planter should make all the necessary preparation for *housing*. If he intends to cure his tobacco with fire, his wood should be cut and hauled to his barns. If he has not got tobacco sticks enough to hang all his crop they also should be prepared. If he intends curing without fire, his scaffolds should be put up around his barns. In short, every thing that will be wanted, should be in its place before he commences housing; for after he gets fully to cutting his tobacco, he will have enough to do without having to do what might have been done before. (K.)

I will in this place make some remarks on curing of tobacco. *Firing*—that is, making fires in the barn, under the tobacco, after it is *hung*—is the surest way to cure fine tobacco. Tobacco that is intended to be *fired* should be hung in the house as quick as can be after it is cut. The house should be filled in a day, if possible, and fires put in immediately. The quantity of heat from fires during the different stages of curing a house of tobacco, should be regulated by the state of the weather. When fires are first put in a house, under tobacco just hung in, they should not be large, especially if the weather is warm and dry. For the first, second and third day, the heat should be such as will yellow the tobacco without sweating of it. After this time, the fires should be larger, so as to keep the tobacco as it cures dry. In dry warm weather, very little fire under tobacco will cure it best. In wet or cool weather, of course, more heat from fires is necessary. Tobacco cures of a yellow color, when managed in this way, if the fires are kept under it from seven to eight days. It is a very good way, also, in firing of tobacco, to let it hang in the house until it yellows by the air, before fire is put under it: then three or four days firing will answer. But the tobacco is not likely to cure yellow—it will, if properly managed, cure what is called a fine red. (L.)

After all that may be said about firing of tobacco, I would not recommend it only at particular times, unless barns could be fixed with furnaces so as to carry off the sparks and smoke, so as to prevent the barn from taking fire. I am apprehensive that even furnaces would not be perfectly safe; for there would be some danger even from having fire in the barn; and the pipes that would carry off the smoke and sparks, might, by passing through the tobacco as well as the barn, communicate fire to some part of it.

The loss of a barn, with its contents, is a heavy one. It takes also a great deal of wood to fire a barn of tobacco; and this on plantations where fuel is scarce, is of considerable consequence. Even if wood is plenty, it takes some labor to cut and haul it. I have for several years past cured my tobacco without putting a particle of fire near it; and I have found it to be nearly, if not quite as fine, as if it had been *fired*. Tobacco of good color, cured without fire, is worth more money in a foreign market, from the circumstance of its not being smoked by the firing process.

Tobacco that is to be cured without fire, should never be put in the house without its being hung out of doors, after it is cut, for several days. There should be erected around each barn a *scaffold*—the tobacco, as it is *cut* and *sticked*, should be hung on the scaffold, and if there should be no appearance of rain, it may remain there for five or six days before it is put in the house. Tobacco, before it begins to cure on a scaffold, is not injured by rains; and after it begins to cure, a rain that lasts a short time does not injure it. It is rain that lasts two or three days that injures tobacco hung on a scaffold. (M.)

A scaffold is constructed by burying in the

ground about two feet, forks set up perpendicularly, about ten feet apart from each other; in which poles are put nearly the distance of a common fence rail from each other. Fence rails are thus put across from one pole to another, leaving a space of four feet between each rail. These are what are called *tiers*. A scaffold should not be very high, for if it is, the lower leaves of the tobacco will become bruised from the winds. A scaffold should be of such a height, as to leave the ends of the tobacco leaves from one to two feet from the ground. It is not so well to erect scaffolds on the north or north-west part of a barn. They should always be made on the warmest sides of the barn. A planter can always get his forks for his scaffolds in the winter season, whilst cutting wood and rail stuff. Having said this much about scaffolds, I now return to the curing and housing of tobacco.

A person unacquainted with scaffolding of tobacco, would suppose that there could not be so much put in a barn in this way, as there could be by *firing*. It would be entirely a mistake. There can be as much tobacco cured in a barn by scaffolding, as there can be by *firing*. It is true it could not be done so quickly; yet in an ordinary housing season there is ample time to do it.

A planter who has several barns, when scaffolding of tobacco, should manage so as to be able to take into the house a part of a scaffold of tobacco every day, except rainy ones, during the season, When tobacco is being carried in the barn from the scaffold, the lower part of the barn should be hung full; and if that part of the barn will hold all that is at that time to be taken from the scaffold it should be left there until the space is wanted for more tobacco from the scaffold. By this means, the tobacco may have the advantage of several days in the barn, before it is finally hung away. The best time of the day to take tobacco in the barn, from the scaffold, is late in the evening. It should be handled very carefully, so as not to crumble the cured leaves. Tobacco should not, whenever it can be avoided, be carried in the barn from the scaffold, while wet with dew. This can always be avoided, except when there is an appearance of rain.

When about to fill a barn with tobacco that has been scaffolded, the tobacco should be hung so as leave *fire holes*, for if, about this time, there should come a spell of wet weather, the tobacco can have fires put under it, and be kept from being injured by the weather. However, tobacco that has been well killed by being scaffolded, will not injure in wet weather as near as soon as a person might suppose. It is only in long spells of warm wet weather that *firing* is necessary for tobacco that has been scaffolded. There are only two cases in which I would recommend *firing* of tobacco—one is in the instance just mentioned. The other is when a crop of tobacco, from untoward circumstances, ripens, or is not fit to be cut until late in the season for housing. Fires, by curing the tobacco quickly, prevents it from freezing in the house, which the lower leaves are apt to do, if left to cure by the air, when housed late in the season. Sometimes planters fire for want of house-room; that is, they cannot wait for their tobacco to cure by the air. I have always thought it best to have a sufficient number of barns. A planter had better build two barns than to have one burnt down.

I will here make some remarks on the construction of tobacco houses. Tight houses will not cure tobacco as well as moderately open ones. Even when tobacco is cured by fires, a very tight house is not the best. There is a large quantity of moisture in a house of uncured tobacco—so there must be some opening for it to escape. I have seen barns where the main building was shedded all around with no other covering except the roofs of the main building and sheds—that is, no weather boarding put on any part of it, except the roofs. Barns of this construction certainly cure tobacco best when there are no long spells of wet weather; for these kinds of barns cannot be fired in. It is also liable to be injured, if not stripped shortly after it is cured. I have also seen barns of this construction with the sheds partially weather-boarded by setting up narrow planks around the sheds two or three inches apart. This is certainly some security against wet weather; yet the tobacco is not sufficiently secured against it. Those who have the timber, can build no kind of barns that will answer better for tobacco than the old fashioned barns built of oak boards and shingles: they let in sufficient air when it is curing, and keep out damp air after it is cured. Barns, when built with plank and shingles, always cure tobacco best when the plank is put on with one end upwards, though the frames of barns weather-boarded in this way, will not last as long as when the plank is put on horizontally. The best way probably to build a barn to suit all times, and all kinds of weather, would be to have all the plank intended for weather-boarding, made into large doors, and well hung with good hinges, so that when the tobacco wanted air, all the doors could be opened—when damp air would injure it, the doors could be shut. A barn constructed after this manner, would cost a little more money for hinges for the doors, and latches for fastening of them. I have seen one built after this manner, which answered very well until it was burnt down. The doors could reach only to the eaves of the house, if so far; of course the other parts of the building must be weather boarded in the usual manner. (N.)

When tobacco is ripe and fit to be cut, there are around the roots of the plants several leaves nearly cured. They can now be saved either before or after it is cut. Tobacco should have no leaves taken from its roots until it is ripe; taking away the leaves too early stops the growth. The tobacco saved from around the roots of the plant, is called *ground leaf*. The usual way of saving this kind of tobacco, is to pull the leaves by hand from the roots of the plants, and tie* them up in small bundles, and straddle them across a stick, until they are cured enough. When fine ground leaf is cured, the usual way is to select the largest leaves that are about half cured, and run a peg three or four inches long through the large end of the stem, filling the peg with leaves, but leaving a space of about half an inch between them, and then hang them across tobacco sticks.

The best time of the day to gather ground leaves, before the tobacco is cut, is late in the day about an hour from sunset; when the tobacco

* Sweet potato vines make a good tie.

ground is wet, the leaves are at this time of the day in *order* to be gathered. Leaves gathered when the dew is on them, will injure before they get dry. Tobacco, when being cut, should not, if it can be prevented, be suffered to *fall* too much—that is, lie on the ground until the leaves become very limber; for when they become too much so, they clam around the stalk, and the tobacco will not cure so good by it. A great deal of care is necessary while tobacco is being cut and carried to the house; it must not be suffered to lie in heaps and heat. While laying in the field, if the sun shines hot at the time, it will be burnt by the sun, if permitted to lay too long. When hauling it to the house, the loads should not be large, as it will bruise when hauled in large loads. I have seen some persons have bushes with green leaves laid in the bottom of their carts before the tobacco was put in the cart. This was done to prevent the tobacco from being bruised. (O.)

There are three ways in use for hanging of the tobacco plants on the stick, one way is, by splitting the stalk before the plants are cut, another way is to put a peg in the big end of the stalk; this is a tedious way and though in old times the only way used, has now nearly gone out of use. The other way is to put a sharp pointed iron spear, with a socket like a chisel on a tobacco stick, and then run the plants on the stick, by running the iron spear through the stalk of the plants. This is the quickest way of the three, but unless there is a considerable space left between the plants, the tobacco will injure. The most careful hands should only be permitted to stick tobacco in this way. Those hands who could not be trusted to put tobacco on the sticks, could be engaged in the tobacco field at other work.

The splitting of the stalk and afterwards straddling it across a stick, though not so quick a way as the one just mentioned, is a better way for several reasons, one is, the plants can be easily regulated when they are put in the house; another is, the tobacco cures quicker, and when housed late is not so apt to be frozen in the house. It does not require so much judgment when putting the plants on the stick. The tobacco also, is much easier to get off the stick when it is wanted to strip.

We will now suppose the tobacco to be housed and cured and ready to be stripped, that is, taking the leaves from the stalks; whenever the tobacco is moist enough, or, in planter's language, in *order*, this can be done. The different kinds and colors must be tied up in separate bundles, and each kind put away by itself. After tobacco is stripped care must be taken to prevent it from heating in the bulks, which it quickly does in warm weather if put away in too moist a state. If it should begin to get warm it should be taken out of bulk immediately and put in a situation to cool and dry. If bulks of tobacco should heat in warm, wet weather, and the weather continues so, the best way then is to straddle the bundles across sticks and hang them up in the house. Tobacco of a fine color and good leaf should never be suffered to heat in bulk; for the color, as well as the leaf, is considerably injured thereby. Tobacco of a dull color and coarse leaf is not injured so much by heating in bulk; though heating in bulk injures any tobacco more or less; the old notion that tobacco was not conditioned to pack in hogsheads until it had heated in bulk is entirely erroneous. Tobacco may be packed without injuring in the hogshead, if properly dried after being stript from the stalks; indeed tobacco after it is stript requires a great deal of attention to manage it properly; and if managed properly until it is in the house and cured, may be by improper management or neglect, made to be worth less money, after this time. I have seen tobacco myself put up in bulks, and suffered almost to rot before any thing was done to it. It is principally the management and handling of tobacco after it is cured, that makes the distinction between a nice planter and an indifferent one.

When bulking of tobacco the leaves should be kept straight and the bundles spread open somewhat like a fan, which can easily be done, by placing too or three bundles at a time, by the person who is handing the tobacco to the bulker, against his breast, and giving them a stroke down with the other. I have found the best way to condition tobacco when stript, to be as follows: Take two tobacco sticks and lay them parallel and about one foot apart, then bulk on them about one hundred pounds, by placing the bundles across the sticks. The tobacco should be kneed down; two persons can move these bulks whenever wanted by taking hold of the ends of the sticks. Tobacco when bulked in this way, if not very moist, will not want any thing more done to it until wanted to pack, especially if the bulks are put up on the *tiers* of the barn, which can be easily done by lifting them up by the tobacco sticks. After tobacco has been bulked in the way here recommended the small bulks should be on a drying day taken and opened, and the tobacco laid down by hand on the large bulking places. Bulking places should be fixed for the different qualities, and as the small bulks are pulled to pieces the different qualities should be placed apart from each other. Though in bulking on sticks as recommended, each quality as near as can be at that time ascertained, should be bulked to itself. In moving tobacco from the smaller to the larger bulks, the large bulks should, if the tobacco is very moist, have only three or four courses of bundles of tobacco placed on them at one time; after they have dried somewhat, three or four more courses can be placed in the same manner, and the operation repeated as long as necessary. Thus a barn of tobacco may be conditioned in this way without any of the tobacco heating.

The best direction that can be given about packing of tobacco in hogsheads are, that the tobacco should only be moist enough to keep it from crumbling, and that fine tobacco should not be pressed so hard as to bruise it. Tobacco, though often packed before, is hardly conditioned enough before the month of May.

I shall now make such remarks on the cultivation of tobacco and the management of the plantation, as have been omitted in the preceding part of this essay.

Plaster of Paris, on suitable land, acts well on tobacco, though it will not cure so fine a color if there is a great deal of plaster put on it while in the field. When there is much litter in the land a small quantity of plaster is of great service, as

it gives the tobacco a healthy growth which otherwise would be sickly. Some planters sow the land with plaster before the tobacco is planted and afterwards plaster the plants, after they are transplanted. This way makes a heavy crop, but it will not cure so fine as it would have done with less plaster. I have generally found that a large spoonful is enough, if put in the bud of the plant directly after being *wed-out*.

When manuring tobacco land with manure that is well rotted, or with ashes, the best time to put it on is when the land is ready to be laid off for making the hills. The plough then throws the manure where the hill will be when made.

I have said that plant beds should be sowed in March; they may, in case of accidents, be sown much later and yet bring plants in time. In the year 1826 I had most of my plants killed by a spell of freezing weather, about the middle of April. About the 18th or 19th day of the same month, I burnt and sowed a bed in low land. I selected the place along the margin of a branch for the purpose of having water at hand to water the bed if necessary; for late in the spring as it was, I knew it would only be by great attention that the plants would come in time. It so turned out that little or no rain fell until near the last of June, and I regularly, every evening, watered the bed: by the middle of June the plants were large enough to plant, and if there had been a planting season, at that time, a great many plants could have been planted for the size of the bed, out of it. I knew a bed that was sown in Feb. 1820; the plants came up in March; on the 2d day of April a snow storm commenced which lasted all day, snow fell to the depth of 5 or 6 inches, which was succeeded by a cold northwest wind. Nearly every plant in the bed was killed; in a few days it was dug up and sowed; as soon as the plants got up the bed was cleaned of them by the flies; about the 8th or 10th of May the bed was dug up and sown again; by the middle of June, there was a smart drawing of plants taken from it, and by the last day of June a crop of fifteen or twenty hogsheads of tobacco planted out of it. I give these two instances to show that plants may be raised in time in case of accidents, although sowed very late in the season.

It seems superfluous to say that a planter should provide and keep on his plantation the best of agricultural implements; for every mechanic, artizan and agriculturist should provide himself with the best of tools, for it has been remarked that none but a rich man can afford to work with an indifferent tool! Of all others a planter stands most in need of labor saving tools and machinery. For tobacco requires a great deal of labor and attention to produce it of a fine quality; how much labor is often lost by giving a hand an indifferent axe or worn out hoe, to work with, how much more ploughing can be done, and how much better, with a plough in good order, than with one worn out. How much time is often lost in sending to a neighbor's to borrow a spade, or to grind axes for want of a grindstone at home. Half the time lost in this way in the course of a year would if employed in some useful labor more than purchase a spade and grindstone. But it is not only to these little matters that a planter's attention should be called, as tobacco puts it out of his power to devote as much time as he would wish to the raising of food for his family, workmen, and animals. He ought to provide such machines and utensils as will enable him to prepare his food for his animals to the best advantage.

I must again say that it should be the greatest object with a planter, to have his tobacco crop grow quickly after it is planted; tobacco that grows slowly is apt to become diseased (for tobacco like other vegetables is subject to disease) and will not cure of a fine color. To make fine tobacco requires great attention to what would seem to be small things. For instance, the setting of a tobacco plant in the hill may retard its growth considerably. Put the main root in the ground doubled like a staple, if it live at all, it will have to grow an entire new root before the leaf grows any. Or set a plant too deep in the ground if it does not rot and die it will be a long time before it goes to growing; when a crop of tobacco is ready for the house early there is more time to take care of it; there is no danger of its being spoiled by being caught in frost; the plants will be entirely cured before very freezing weather commences, consequently, there will be none to freeze in the house. A forward crop likewise can be stripped early and of course the sooner got ready for market.

As I am about to close, I must say, there is nothing recommended in my essay that is far-fetched; to an experienced planter, the most of it will appear common-place, but to young planters it will give many a useful hint.

Young men when commencing any business stand in need of the experience of those who have been engaged in the same kind of business before them.

[*Note*—The words in italic are technical terms used by tobacco growers.—*Ed. Am. Farm.*]

[Believing that it would give additional value to the foregoing interesting essay, we requested of a gentleman who is well qualified for the task, to furnish notes and remarks on those points of practice and opinion, which, though doubtless correct as to Maryland, or bright tobacco, are unsuitable to the very different product sought to be made in Virginia. The writer of the commentary furnished upon this request, has had long experience in tobacco culture; and the high prices obtained for his crops were sufficient evidence that the after management was judicious. Not having space for all the notes in this number, they will be deferred to the next.—ED. FAR. REG.]

MONTHLY COMMERCIAL REPORT.

For the Farmers' Register.

The present month is not marked by any thing of peculiar interest. Political affairs wear a pacific aspect. Money matters have not improved. Stocks of almost every description are even lower, so great is the want of confidence and the scarcity of money. European capitalists have ceased to invest in American stocks, and their own govern-

ments are now endeavoring to obtain large loans to meet the heavy expenses incurred by their warlike preparations. The treasury of our federal government is worse than empty; for it cannot meet the demands upon it incurred some months past. Many of the state governments are in a similar condition; and the banks south of New York, so far as the community is concerned, have suspended. Thus fiscal matters are in a most disordered state, without an early prospect of restoration.

The variations in the prices of produce in Virginia, since last month, have been slight. Tobacco has advanced a little, and may be quoted at $4¼ to $9. Cotton is rather lower—price 8 to 10 cents. Canal flour $4½. Corn 42 cents. Bacon 8 to 9 cents. Shipments of flour are going forward to England from New Orleans, New York, &c. Domestic exchanges are rather worse. The receipts of cotton at the principal markets in the United States to the latest dates are 1,105,000 against 1,372,000 at the same period last year.

March 29, 1841. X.

TO PREVENT INSECTS CLIMBING UP FRUIT-TREES.

At a late meeting of the Entomological Society, Mr. James H. Fennell communicated the following successful mode of preventing insects ascending the trunks of fruit-tees. Let a piece of Indian rubber be burnt over a gallipot, into which it will gradually drop in the condition of a thick viscid juice, which state it appears it will always retain; for Mr. Fennell has at the present time some which has been melted for upwards of a year, and has been exposed to all weather without undergoing the slightest change. Having melted the Indian rubber, let a piece of cord or worsted be smeared with it, and then tied several times round the trunk. The melted substance is so very sticky, that the insects will be prevented, and generally captured, in their attempts to pass over it. About three pennyworth of Indian rubber is sufficient for the protection of twenty ordinary sized fruit-trees.

PROCEEDINGS OF THE PEE-DEE AGRICULTURAL SOCIETY, AT CHERAW, S. C., FEBRUARY 22, 1841.

Extract From the Farmers' Gazette.

The following premiums were awarded:

To Gen. James Gillespie, for having produced the greatest quantity of cotton on three acres of upland the amount being 1735 1-3 lbs. per acre of seed cotton, a silver cup of the value of $30 00

To Samuel Keeder for the greatest production of sweet potatoes, he having produced on one acre three hundred and twenty bushels, a silver cup of the value of 10 00

The following is a memorandum of the culture of the cotton, soil &c. by Gen. Gillespie.

"Land red or mulatto, about three hundred bushels of manure chiefly from the stable, a part fermented and a part not, was spread broad-cast to the acre. The ground then broken up with a two horse turning plough; then run off with a 10 inch shovel, into rows 3 1-2 feet apart. Scattered forty bushels of partially killed cotton seed to the acre in these furrows, upon which a ridge was made by running two furrows with a dagon plough. Then sowed one bushel of plaster of Paris to the acre broad cast, and ten bushels of slacked ashes per acre on the tops of the ridges.

Planted 13th April, the seed was rubbed in plaster of Paris.

Chopped out with 9 inch hoes 5th May.

First ploughing 6th May run two furrows in each row with a sweep.

First hoeing May 19th and thinned to one and two stalks in each hill; the cotton had died considerably, replanted at this hoeing for the third time.

Second ploughing, May 21st, run two furrows with a shovel in each row near the cotton: June 1st ploughed out the middles with two shovel furrows. June 2d hoed second time and replanted the fourth time as the cotton was still dying; the previous replanting had come up but most of it died.

June 23d ploughed third time; three shovel furrows in a row: June 28th hoed third time.

July 20th ploughed fourth time run dagon plough (mould board to the cotton) and shovel in the middle:

July 28th hoed fourth time.

Product: 5206 of seed cotton making an average of 1735 1-3 lbs to the acre.

It will be observed that this cotton died so much as to make four replantings necessary, and even then a perfect stand was not obtained. This I attribute to the too great formentation of the cotton seed placed under the ridge, combining probably with the unrotted stable manure. It was hoped that this rapid fermentation would be checked or carried off by running a furrow on each side of the ridge on the 21st of May and leaving it open for a few days, but in this I was disappointed. The object in placing the cotton seed under the ridge, was to force the plant forward early.

The stable manure was spread broad cast.

1st. Because that quantity under the bed would be likely to destroy the plant before the roots could pass through it.

2d. If placed under the bed and a drought of but short duration occurred in the latter part of the season, if the offers of forms did not drop during the drought, a good season would cause so sudden and rapid a growth of the plant as to cause the forms then to drop.

3d. To feed the plant through the latteral roots when maturing the balls. The plaster of Paris was put on to assist the cotton in case of drought or ordinary season, but rainy as the year was, I should say, judging from former experiments with it, that the plaster did no good.

The ashes were used because I believe them to be a good manure in all lands well drained; I have never tried them on wet lands.

The above is a true account of the method of working and product of 3 acres of upland cotton to the best of my knowledge.

JAS. GILLESPIE.

The following is a memorandum of sweet potatees raised on one acre of land by Samuel Keeler.

The land on which the patatoes were planted was sandy. It was broke up in April and thirty-five two horse loads of manure, the scraping of the yard, was applied. This manure was ploughed in and then the land was made into hills three feet by three and a half, ploughed three times and hoed out each ploughing, product, three hundred and twenty bushels. The potatoes planted were the Spanish variety. I certify the above, to the best of my knowledge. S. KEELER.

COOKING BEETS.

From the Albany Cultivator.

Take beets of middle size, and after removing the tops and dirt, roast them in a fire as potatoes are roasted. When done, they are peeled and served up in the usual manner. One who has tried them in this way, says they are much sweeter and richer than when boiled.

SUMMARY OF NEWS.

BANK AND BANKRUPT ITEMS.

Republished from the weekly summaries of news, attached to the Weekly Farmers' Register.

[It is designed that the concise summaries of general news prepared for the Weekly Farmers' Register, shall also hereafter be presented together at the end of each monthly number, as will be commenced in this. One of the main objects of this is, (in pursuance of views stated at page 157 of this number,) to present to the agricultural public facts and truths in regard to the banks and their operations, which the publishers of newspapers generally are unwilling to utter, and in regard to which, therefore, there is a deplorable want of information. To bring up the banking history of these eventful days, from the pretended "resumption of specie payments," all items relating to the banks which appeared in the weekly numbers of January and February, will be here republished; and the entire summaries of news thereafter, commencing with the present month.]

Extract From the Weekly Farmers' Register, Jan. 16, 1841.

The time fixed by the laws of Pennsylvania, Maryland and Virginia, for the banks to resume specie payments, is Jan. 15, or soon after; and some of the newspapers are urging (and we fear successfully) that the resumption should be posponed, on the grounds that to meet it the banks must *contract their issues*. No doubt!—but when will not the same reason exist, and the argument be equally good? The banks which cannot pay after a suspension since 1837, (acknowledged or virtual,) will never pay. It is time for those institutions which are bankrupt, to be made to appear so, and that the most rotten parts of a fraudulent general system shall be allowed to sink, by withdrawing from them that support of government which alone upholds them.

On the 11th, the presidents of all the banks in Baltimore held a meeting and resolved that it was inexpedient to resume specie payments unless the Virginia banks did so also, simultaneously. This, we suppose, settles the matter that the reign of irredeemable paper and irresponsible banking is to continue—as the resumption in Virginia, by law, was to *follow* that of the more northern banks.

New York Jan. 6.—United States Bank stock fell 7 per cent during this day, having sunk to 53. The whole decline of price is 10 per cent since the recent publication of the bank's own report of its own affairs.

July 7th further decline to 50¾.

The Franklin Bank of Baltimore has failed.

The Philadelphia Ledger of 14th, from which the above is copied, expresses the opinion that the Philadelphia banks would resume specie payments on the 15th—and considers the declaration of the presidents of the Baltimore banks (stated above) as decisive that they *will not* resume at present.

Saturday, January 23, 1841.

On the 15th, the Philadelphia banks resumed specie payments, and the Maryland and Virginia banks *did not.*

The resumption law of Maryland requires her banks to pay specie *after* Virginia—and the law of Virginia requires her banks to resume specie payments *after* the banks of Maryland. The banks of each state proclaim their entire ability and readiness and anxiety to resume payment—but both stand upon the point of law, (or the point of bank honor perhaps,) and wait for the banks of the other state to pay either first or "simultaneously!" How long will these contradictory "sayings and doings" continue?

$110,000 are stated to have been drawn from the Philadelphia banks the two first days after resumption, the United States' Bank having bled for more than half.—*Whig.*

Large sales of United States bank stock at Philadelphia on January 20, opened at 52, and closed at 53. A small amount between the boards sold at 54. Same day in New York, 975 shares of this stock sold at from 51 to 51¾

Saturday, January 30, 1841.

The Baltimore and Virginia Banks, have at last agreed upon a "simultaneous" movement, and now promise to resume specie payments on February 1st. Qu. Have they gained any thing, in reputation or otherwise, by the addition of 15 days delay to their previous failure to pay?

Philadelphia, January 22. The correspondent of the Journal of Commerce writes that "business of all descriptions is less active, and money in greater request than for the past year. It now commands a rate of interest running from 1½ to 2½ per cent per month—indeed it is next to impossible, except on the most unquestionable paper, to obtain it at any price. The banks are not discounting, and dare not, while they stand coupled with the Bank of the United States. The confidence, which it was mainly hoped would be extended to our currency on a united resumption, is not yet apparent, nor will it be, while institutions notoriously insolvent contribute in any large degree in furnishing it."

It is ascertained that the New Brunswick Bank has stopped, and it is feared, finally, *Ib.*

The Governor of Mississippi states, that he has issued his proclamation declaring the charters of the following banks forfeited:

The Tombigbee Rail Road and Banking Company;
The Hernando Rail Road and Banking Company;
The Mississippi Rail Road and Banking Company;
The Benton and Manchester Rail Road and Banking Company;
The Aberdeen and Pontotoc Rail Road and Banking Company;
The Bank of Vicksburg;
The Mississipi Union Bank, and
The Citizens Bank of Madison County;

Several others, he believes, have failed to comply with the injunctions of the Bank Law.

New York, Jan 27.—The stock market again gave way to-day, and our quotations are lower, without any exceptions. United States Bank Stock fell 1½, Delaware ¾, North American Trust ½, Harlem ½, Stonington ½; and the market closed with a tendency decidedly downward.—*Ev. Post.*

Saturday, February 6, 1841.

The Farmers' and Mechanics' Bank of New Brunswick, (N. J.,) has broke, and the doors were closed on the 23d ult., by an injunction of the Chancellor.

On February 1, the banks of Virginia and Maryland resumed specie payments, *after a fashion*. By each bank, and each branch having previously exchanged. or otherwise sent its own notes as far from home as possible, and by issuing no other than the notes of other banks or branches, (which they can, and of course will, refuse to pay in specie,) and by inducing the merchants under their control to draw their checks for "*current notes*," the banks had admirably well "prepared for paying specie"—that is, they had so arranged as to pay as little of it as possible. To forward this great object still more, there is now a bill before the Virginia legislature to authorize the banks to issue small notes, (for sums under $5); and it is to be feared that this additional measure to serve mere bank interests, and to keep specie out of circulation, will pass that body. The northern brokers, who alone are enabled by their position to counteract these non-paying designs of the banks, will be the only persons who will obtain specie to much extent. And whether drawn and carried off by foreign brokers, or otherwise remaining in the vaults of the banks, the specie will be of very little service in filling the circulation of Virginia, so as to guard against the worst evils of the next bank suspension. The proper policy, for all who prefer the interest of the country to that of the banks, and who dare so to act, is to refuse all checks for "current notes," and to draw specie wherever it can be carried to the country, and diffused through the *country* circulation, and to receive from no bank or branch, any notes but its own, which it can be required to redeem.

Since the resumption of specie payments, United States bank stock has fallen from 52 to 48 and a fraction.

February 13.

The advice to draw specie from the banks, and diffuse it through the country circulation, as offered in our last week's summary, was too late; and the occurrence of another bank suspension, which was then intimated, had then actually begun in Philadelphia. The United States Bank, after a very short resumption, again stopped payment on the 4th. The news reached this place on Sunday, the day after our last weekly publication, and on Monday morning, in the first banking half hour, the Branch Farmers' Bank and Branch Exchange Bank again stopped specie payments, after a *six days* "resumption." The thirteen other banks of Philadelphia also stopped a day after the United States Bank, after having first, but the night before their stoppage, held a joint meeting and declared and published to the world that they would continue to pay. The New Jersey, Delaware and Baltimore banks have followed their example, of course, and so will all in Virginia, and probably all south of New York that have not already done so. The banks in Maryland and Virginia may not have paid away much money in their six days resumption; but another and so speedy a suspension, will serve as a heavy draft upon, and prodigious lessening of, their remaining credit and reputation, and hold on the confidence of the country at large. The banks throughout this country are above all law and all restraint; and they are made by law impregnable against all assailants, except themselves. And by their own hands, or measures, they are now reaching that end which is approaching, however slowly, but which is yet inevitable. Now will ensue another long time of suspended payments—if indeed payment will ever be resumed *bona fide*, and to full extent, by the existing banks of this country, or any future banks established upon the present system. Every body (except the most submissive and subservient of bank slaves) admit that the banking system needs reform; yet none will attempt to forward it. The banks are left to reform themselves; and, in sufficient time, they will do it, and with a vengeance.

In the new act which the Virginia legislature will pass this session to relieve the banks, (as such laws now are made annually, and as regularly required as new almanacs,) we beg to suggest the propriety of a provision to direct a new style of bank notes, for the relief of tender consciences of bank presidents and directors. We propose simply to insert the word "not," so that a bank note shall read thus: "The President, Directors & Co. of the Bank of ——, promise *not* to pay twenty dollars," &c. &c. This amendment, while serving to conform much nearer (if not without exception) to the truth, would not at all lessen the currency of the notes, nor impair the credit of the banks adopting the change of obligation. It is not the words of their promises on their notes, nor the credit or solvency of the banks, that sustains their circulation; it is the general endorsement by the state.

United States Bank stock has sold as low as 25 since its "suspension," or *bankruptcy*. Its notes are 15 per cent. below par in Philadelphia. Notes of other banks there 5 per cent. below specie.

The early stoppage of the Farmers' Branch Bank in Petersburg, we are proud to have proved, by presenting for specie a check of $400; which being refused payment, (their first refusal,) we had the bank repularly protested, and would have forthwith sued, (and enforced our right by legal process,) if the authorities had not thought it best to succumb and pay the demand in legal coin. If they had not, we would have forced them to do so. As it is, we have shown the way to all who choose to compel banks to pay their debts.

What we have said, and still more what we have done, to expose the false pretences of the banks, and the rottenness of the system, has aroused the malice of the satellites of the banks. This gratifies us much, as it shows that our small shot have not been fired altogether in vain. "The wounded pigeons are known by their fluttering." We fear not the banks, omnipotent though they be, and heartily despise the anger and malice of their would-be-borrowers, and tools.

The Richmond Enquirer of Thursday, says, "A fine spirit animates our presidents [of the banks.] One of them told us yesterday, in a decided and buoyant tone, when asked what we should say for them; 'Say that we are paying specie, and that we mean to do so. But don't say as you did on Tuesday—*we will if we can*. Say unqualifiedly, we can and will go on.' The Richmond Compiler of yesterday says, "The banks of this city have paid all demands in specie so far, and are determined to go on, it appears. Some of the officers tell us that there can be 'no ifs and ands' about their course—that they will pay specie at any event." We wish that such may be the result, but have no faith in it. We have noticed that declarations of willingness to pay were often uttered, through newspapers or otherwise, the bolder and louder in proportion to the nearness of an approaching and certain suspension. The banks of Virginia are no doubt as good as any others; but none are able to maintain payments, because the whole system is rotten and sinking, and deserves to sink and perish. We learn from private information in Richmond that the banks there have not paid, and do not pay specie for checks; and as very few of their own notes are in Richmond, (by their own previous policy,) of course the demands to pay notes have as yet been small.

The banks of Georgia resumed specie payments on the 1st—just in time to unite in the general re-suspension—which news may be expected next.

An injunction has been served upon the Newburyport bank, to stop its operation.

The act to permit the banks to emit small notes ($1 $2) passed on Tuesday. This would have been a very bad measure, with specie payments existing. But under a suspension, we admit it to be proper and right. The best and only *redeeming* feature of the law was very nearly being struck out. This makes these notes redeemable in specie at any branch bank, as well as where issued.

Saturday, February 20.

A report from the Secretary of the Treasury was laid before the senate of United States on February 12, "giving his views and calculations as to the losses sustained by the government and people through the Bank of the United States, and State Banks. He estimated the fluctuations in Bank currency, affecting prices, extravagance in living, sacrifices of property &c. (not connected with his other computations) at *one hundred and fifty millions of dollars*!! The aggregate loss he computes at three hundred and sixty-five millions, four hundred and ninety-seven dollars!!!"

We see that the newspapers of North Carolina and Georgia are reporting, and professing to believe, that the banks of Virginia are paying specie, and are applauding them highly for it. Their editors, or those who speak in their names, are indeed "thankful for small favors," and are perhaps the more ready to believe, or to report that the Virginia banks are paying specie, because they hope that the some belief, or good report, will be extended to their banks. Most commercial newspapers are as much under the control of the merchants (if not directly of the banks) as the merchants are under the control of the banks—and therefore few of their conductors dare to offend the banks by telling any unpalatable truth, until it has become notorious, and can no longer be held back with any benefit. Therefore it is useless to expect to learn from the newspapers whether the banks pay specie, in remote towns from which we have no other means for information. But we infer that the banks of Richmond and of Petersburg are as much specie-paying banks as any others in the state (or perhaps in the United States,) and there is certainly no *bona fide specie paying* bank there. The Virginia bank in Petersburg, alone, pays its own notes, and those only. And as scarcely any notes are in circulation in any town where issued, it makes very little difference whether these few (when presented) are paid, as at this bank, or refused to be paid, as elsewhere. Checks are not paid in specie, as a general rule, at any of the banks, and specie change is very little more abundant in circulation than before the so-called "resumption." If such as these are indeed specie-paying banks, there is but little difference between the paying and not paying specie. It is admitted by the most thorough bank partizans that when the northern banks stop paying, ours must follow the example; and this is urged as their all-sufficient excuse. If so, (and we do not mean to deny it,) we have not to look to the legislation of Virginia for improving our currency, but to that of the northern states. Of course, while the present banking system lasts, there is no possible chance for a truly convertible paper currency. The present shallow and empty pretence of specie-paying made by or for any banks that have but lately "resumed" or pretended to resume, will not continue longer than the several legislatures shall pass the annual indemnifying law for the benefit and protection of the banks.

The teller of a specie-paying bank in Macon, Ga., pays its notes in small silver, and weighs every separate piece. In this manner, and by great industry, he paid out $30 the first day of resumption. A holder of $400 in notes of the bank, has engaged the services of the teller for several weeks in advance. This operation presents the very *beau ideal* of a modern convertible paper currency, and the bank which has shown the way ought to be esteemed a *model institution*. We recommend the example to all banks that claim to pay specie, and desire to enjoy the reputation at as little cost as possible.

Saturday, February 27. 1841.

Most of the banks of Virginia still *pretend* to pay specie, and, judging from the newspapers, most people in and out of Virginia, either believe, or profess to believe, in the truth of the pretension. We repeat that there is not a *bona fide* specie-paying bank in Virginia—and we predict that there never will be one, while the present banks and banking system last. It is very easy to *assert* the contrary, and very difficult (for any but the bank authorities themselves) to *prove* the truth; but as soon as the Virginia legislature shall have passsed the annual act of *plenary indulgence*, for all past and future banking delinquences, the truth will be less hidden. In the present state of things, and under the despotic bank influence that prevails, and the depraved moral sense which banks have introduced, it is more creditable and *honored*, as well as more safe and profitable, for an individual or a newspaper to tell falsehood to benefit the banks, rather than truth to their disadvantage.

The legislature of Pennsylvania have passed an act suspending for 40 days the existing legal penalties incurred by their *avowedly* suspending banks. The governor has not yet given his assent, but we presume that he will; and that the 40 days will be hereafter extended to as much time as the banks may require.

Ten years ago, the city of Philadelphia had, or thought she had, more than fifty millions of active bank capital. Now, of really available active capital, she has only about five millions. All the rest is either irrecoverably lost, or loaned to the state and the United States Bank, so as to be entirely unavailable. Yet Philadelphia is going on with her business. What a comment is this upon the notion that a great amount of banking capital is essential to the improvements of business!—*Jour. Com.*

Public opinion has changed very much within twenty years. There is now no reverence for banks; and a national bank would, as to public favor, rest on a very sandy and constantly receding foundation. Men have learned to go alone. The merchants and manufacturers do not now rest upon the banks. A most wonderful individuality and personal independency have come into the community. The banks have broke or have been paid up until their loans are no more than their capitals. They owe the community as much as the community owe them. Affairs have assumed a natural, free-trade shape, almost without our being conscious of the change.—*Ib.*

A letter from, Cincinnati, (in the St. Louis Republican) says the bills of the Bank of Gallipolis are not worth one cent in the dollar, and probably never will be. He adds: "I have this morning received a circular from the new cashier stating that frauds to an unknown but enormous extent have been practised by the former officers, in putting out circulation without the knowledge of the directors, and that even now agents are supposed to be employed in that work. The bank has stopped, and their assets are supposed to be exhausted."

United States Bank stock had fallen in London from £14 5s. to £11 10s. (about $13) a share, in consequence of the news from the United States of the *intended resumption*. How much more will it decline when they hear of the actual issue?

A public meeting of the citizens of Augusta, Ga., on the 13th, adopted a preamble and resolutions of which the essence is in the following: "Resolved that

all the Banks of Georgia ought to suspend immediately the payment of specie."

Sales of the United States Bank stock in New York (on 24th) opened at 22½ and sunk to 20. [*Cour. and Enq.*] In Philadelphia it sold at $20 at 60 days. Same day exchange at New York at the following rates of discount:

"On Boston	par to ¼
Philadelphia	4 to 4¼
United States Bank	14
Baltimore	4
Richmond	4
Charleston	3½
Savannah	5½
Louisville	8
St. Louis	8
North Carolina	4
Cincinnati	6
Augusta	8
Mobile	10½
New Orleans	7½"

New York Express.

Strange that the notes of the "*specie-paying*" banks of Virginia, and North Carolina should be 4 per cent, below par? Unluckily for the banks, the prices of exchange and of specie *will not lie.*

SUMMARY OF NEWS FOR MARCH.

(*Republished from the Weekly Farmers' Register.*)

Petersburg, March 6, 1841.

Philip P. Barbour, Judge of the Supreme Court of the United States, died suddenly at Washington on the night of the 24th February.

The Journal of Commerce says that a large number of the colored persons who emigrated from Philadelphia a few months since for the island of Trinidad, have returned, and bring an unfavorable report of the condition and prospects of those who remain.

Extensive Swindling.—Sylvester's Reporter publishes a list of 152 banks which have failed, and swindled the community out of at least $38,000,000

The Grand Jury at Baltimore have found a presentment against James L. Hawkins, late cashier of the Franklin Bank of Baltimore, for abstracting $100 683,78, the property of that institution; and a bench warrant issued for his apprehension.

A. M. Carter, discount clerk of the Farmers and Mechanics' Bank at Baltimore, is reported to have fraudulently made use of seven thousand dollars, belonging to the funds.

The New York American thinks there is a growing disposition in that city to include banks in the bankrupt law now before Congress, and says it is not surprised at this, "for many of them have provoked the forbearance of an honest community almost beyond endurance." A writer in the Journal of Commerce endorses this opinion, and says—"Many merchants of this city, who last year opposed it, now approve it; and simply because they know of no rule of equity which should absolve a bank from being compelled to pay its honest debts, any more than an individual merchant. And the full conviction of any bank that, if it did not punctually pay its debts, it would be wound up, would most effectually put an end to all the wild and ruinous expansions of the banks from which the country has suffered so much during the last five years."

The bankruptcy (that is the discovery of it,) of the bank of Gallipolis, Ohio, has exposed a plan of swindling transactions unexampled even among banks. By enormous issues of notes, beyond the means of redeeming, farther than to preserve enough credit to trade and cheat upon,—the credulous bill-holders will lose, as is supposed, some $200,000. But if detection had not come too soon, and cut short this gainful business, it would have been greatly increased, and immediately, as arrangements were made to issue notes for a million of dollars more. The President, Cashier, and other conductors of the bank were a few individuals from New York and New England. "None of the citizens" says a letter to the Ohio Statesman, "of the place have ever had any office in the bank except as directors, each of whom, it is said, held stock to the amount of *ten dollars*. On the 25th ult., Farrington, (the then president and *proprietor* of the bank) was arrested on charge of obtaining money under false pretences, and held to bail in the sum of $500. On the 29th ult. he was again arrested on a charge of uttering and passing forged notes of the bank of Gallipolis, and on examination was held to bail in the sum of 100,000, which he was unable to give, and has been committed to the jail of the county."

We were shown yesterday a letter from Cincinnati stating that quite a panic existed there, owing to the failure of the Bank of Circleville, supposed to be another New York swindling shop. Large amounts were offered for sale at ruinous rates of discount. Brokers, however, refused to buy at any price.—*Wheeling Times.*

A large business is done in Boston in shipping ice for southern ports. Last year 32,000 tons were shipped from Boston and Charleston. This year the exportation will probably amount to 40,000 tons, employing 133 vessels. Nearly all this supply is yielded by two ponds.

The propositions before the lower house of the Massachusetts Legislature to indemnity the proprietors of the Charlestown Nunnery, destroyed by a mob a few years ago, has been indefinitely postponed, by a vote of nearly five to one. The number against it however does not diminish the justice of the claim.

We learn from Capt Collier, of the bark Hobart from the coast of Africa, that all the slave factories had been broken up by the British cruisers.

The *Madisonian*, of Saturday, publishes the following extract of a letter, dated, Halifax, [N. S.] Feb. 19, 1841. "Several regiments have been ordered to New-Brunswick, and we are informed that orders have been sent from the home government to the West Indies, to embark all the regular troops there for this place; the Islands to be garrisoned by the militia.

The Legislature of Kentucky have passed a resolution offering a reward of $3000 for the discovery of the cause of milk sickness in cows at any time within five years.

In the appropriation bill, some salutary reduction and limitations have been imposed by the House of Representatives, on the excessive *indirect* emoluments of collectors, postmasters, district attorneys, marshals, clerks, &c. &c. Some of the most fortunate of those officers have, recently received severally from 10,000 to 60,000 dollars a year. This point of time, or turning of the political tide, when one party is just about to go out of power, and another to come in, is the most favorable juncture, to repress gross abuses, and it has been now, advantageously used for that purpose—and whatever may have been the motives, so far as they go, the results will be excellent. An out-going party, when surrendering the spoils to their opponents, will of course be very willing to lessen the profits of offices which they cannot expect to possess; and the in-coming party will be ashamed, so soon, to object to reforms, which they had been calling for so loudly. Either a year earlier or a year later, these salutary reformations of abuses would be much less easy to effect.

An able letter from a Boston merchant to Gov. Porter, on the condition of the Pennsylvania banks, and his action thereupon, has the following passage. "A suspension of payments in specie is a breach of contract, a state of discredit and dishonor, which, if tolerated at all, should be considered as a deplorable calamity, the result of a dire necessity, and only to be submitted to for the shortest possible period. The idea that resumption can be attempted *too soon*, that a depreciated currency will cure itself, that any *course of trade* will bring specie where its use is dispensed with, are amongst the oft repeated fallacies, which all experience confirms as such. The depreciation of a paper currency issued by banks considered solvent, arises wholly from its excess. The only remedy is its contraction—its reduction in quantity."

On March 3d., the legislature of Virginia elected the Hon. Wm. S. Archer, senator of the United States.

A prodigious croud of visiters, from all parts of the United States, had assembled at Washington to be present at the inauguration, of President Harrison, on the 4th instant. On that occasion, there must have been assembled together more hungerers for, and expectants of loaves and fishes, than had been at any previous time since the miraculous provision of them for the multitude in the wilderness of Judea.

Since our last report, United States Bank stock was sold as low as $16, but since, the price has recovered a little.

Judge Peter V. Daniel, of the United States Circuit Court for Virginia, has been appointed to the vacant seat in the Supreme Court, and Judge John Y. Mason of this district, has been chosen to fill the place vacated by Judge Daniel.

By last night's mail (March 5) received the "European," printed in Liverpool, Feb. 10, and brought by the President steamship, which furnishes the following items:

Advices from Canton were, to November 3, gloomy.

Apprehensions were entertained by the English of the final result of the negotiations with the Chinese authorities. It was supposed that the British commander would be duped, and his conduct was severely censured. The British troops holding the Island of Chusan were very sickly—out of 3650, there being only 2036 fit for duty.

The Earl of Mountcashel (Feb. 8) had brought the case of McLeod before the House of Peers, and spoke highly in reprobation of his treatment. In reply to his inquiries, the premier said that he "might rest assured that every measure would be taken that was necessary to secure the safety of her majesty's subjects, and to uphold the honor of the British nation." The subject had been debated more at length in the House of Commons.

The cotton market had declined a little—owing to the difficulties of the stock and money market.

Saturday, March 13th.

All the nominations to places in President Harrison's cabinet were confirmed by the Senate.

M. Daguerre has announced that he has succeeded in making the photographic plates so sensitive as to receive an impression in less than a second; and that, in consequence, he is able to receive the forms of all moving objects, as perfect as those of things stationary.

British cruisers continue to exercise, illegally, the *power* of search on American vessels, suspected by them of being engaged in the slave trade. The following is the latest example: "A letter, written at sea, on board the brig Cherokee, Capt. Webb, of Salem, dated Dec. 27, 1840, states, that a few days before they reached the Cape, the brig was overhauled by her Britannic Majesty's brig of war Curlew, and, after a full examination of the Cherokee's papers, her hatches were torn open, under pretence of searching for slaves!"

Branch Georgia R. R. Bank.—We observe in the reports of the exchanges in Columbus, that the bills of the Branch of the Georgia Rail Road Bank in this city, are quoted at 15 per cent discount, and, as the bill holders in the western part of the state may be led astray by this quotation, we take this occasion to assure them, that the Branch is paying specie, and will continue to do so, and as a consequence, her bills are worth as much in this city as the bills of any other city bank.—*Aug. Chronicle.*

In strict accordance with *our rule* of interpreting such bank notices as the above, the bank in question stopped specie payments immediately after, and so effectually and undoubtedly, as to make an official publication of the fact.

The very interesting case of the Spanish vessel Amistad, and the Africans who captured her, is at length decided by the Supreme Court. The National Intelligencer says, that "the judgment of the district court of Connecticut was affirmed in every particular, except as to sending the negroes back to Africa. They are, by the decision, to be discharged, as free men."

The regular New York correspondent of the National Intelligencer, (date March 9th) says: "The money market [city of New York,] is in a very unsettled state. The attempt to discredit the bills of the Free Banks has been so far successful, that most of the brokers refuse to buy those of the Buffalo Banks, and some others. The notes of the rest of the country banks are at 3 to 5 per cent. discount. This cannot last long. The rate must come down, or the banks will be run upon for specie" These words of *bank language*, put into *plain English*, mean that all the country banks of New York are on the eve of *avowed* stoppage of payments. We suspect that the city banks will follow.

The business men of Richmond (i. e. borrowers,) are very anxious for the banks there to abandon all pretence of paying specie—as that pretence invites the demands of brokers, and lessens the amount of loans. Have a little patience gentlemen—your wish will be completely gratified, as soon the law of indulgence now before the legislature shall have passed.

It is stated that the notes of the Union Bank, Buffalo, are no longer redeemed by the agent at Albany. [*Jour. Com.*

The Raleigh Register of the 6th says, that the North Carolina Banks have again suspended specie payments—or *confessed* having done so, as *we* would say. So they go—and so they will go. The pretence of paying specie by a bank will soon be held as ridiculous, as would be the claim of chastity by an inmate of a brothel.

Saturday, March 20.

The Richmond Compiler, after stating the recent (acknowledgment of) suspension by the North Carolina banks, adds,—"Our banks stand now pretty much alone. If they can continue to pay specie while there is no place whence they can draw specie to restore that they pay out, and, what is worse, exchange with New York, *five per cent.* against us, and render the proper aid to trade at the same time, they will do wonders." There is a still greater wonder re-asserted in the above passage, with the absurdity and impossibility of which our friends of the Compiler are not yet impressed; that is, that *the notes of the banks of Virginia, if truly paying specie, as asserted, should be five per cent. below par in New York.* But, upon our ground, maintained throughout, that our banks do *not* pay specie, the high price of exchange ceases to be a wonder. The history of the world presents no such bare-faced and manifestly false pretension, as this of specie-paying by banks being so universally, (in appearance at least,) received as true by the community. In a week or two the miserable pretension will be dropped by the banks.

The Bank of Western New York has suffered $13,000 of its notes to be protested. It is said to be the intention of the bank to bring its business to a close.

The Council of Wilmington, Delaware, have passed an ordinance for issuing bills or drafts of a less value than one dollar.

The Senate of the United States have adjourned after a few days of session under the new administration, to pass upon executive nominations to office—which have not been many.

Blair and Rives, editors of the Globe, have been discharged from their fat office of printers to the Senate of the U. S., by a recent vote of that body. The debate on this question produced a melo-dramatic scene of quarrel, defiance, challenge and acceptance, and, finally, of public reconciliation, between Mr. Clay, of Kentucky, and Mr. King, of Alabama, which formed the principal interest of the short extra session of the Senate.

By proclamation, dated March 17, the president of the United States has called an extra session of Congress on May 31st. The subject of discussion and action, and the results of this session, will be more important than those of any session since the first under the present constitution.

The Baltimore American, a highly respectable paper, which belongs to no party, but is certainly favorable to the new administration, states that the following will be the prominent measures recommended by the new administration to Congress:

"1st. The repeal of the Sub-Treasury Law.

"2nd. The imposition of a tariff of duties sufficient to meet the expenses of the General Government.

"3d. The adoption of a plan for the distribution of the proceeds of the public lands.

"4th. The adoption of some plan or system for the safe keeping of the public moneys."

The total number of the United States Army is 12,577 men.

The Legislature of Virginia has passed the "inspection law," proposed to meet and guard against the procedure of the government of New York. It will not go into operation until May, 1842.

The *annual* bill for indulgence and indemnity to the banks has passed the legislature of Virginia. It is

scarcely worth while to trouble ourselves, or our readers, as to the provisions, as they are doubtless just whatever the banks ask for and propose. It would save much trouble if the banks were permitted to make *directly*, as they do *indirectly* and ultimately, all laws for their own regulation.

On the night of the 12th, and morning of the 13th inst., a storm did much damage at New York, and along the coast. The New York pilots say it was the severest known for 27 years.

By the following extracts from the Albany Argus, it seems that the speedy stoppage of the New York country banks, (which in New York, is called *bankrnptcy*) which we predicted in our last paper, is already well advanced.—Ed,

"The panic in relation to "red back" [free bank] notes, which has pervaded the public mind for several days, may be said to have reached a crisis yesterday. Down to Monday inclusive, 13 of these institutions had stopped payment, viz:

Millers' Bank of Clyde; Farmers' Bank of Seneca county; Tonawanda Bank; N. Y. City Trust and Banking Co. (fraud); Tenth Ward Bank, Chelsea Bank, Staten Island Bank, and Washington Bank, N. Y.; Erie County Bank, and Union Bank, Buffalo; Bank of Western N. Y., Rochester; Farmers and Mechanics' Bank, Batavia; Binghamton Bank.

On Wednesday, the following were thrown out by the agents [of these banks] in this city, viz.: Bank of America, and Merchants' Exchange, Buffalo. And finally yesterday, (Friday) the explosion became general, and the agents threw out the following:—Mechanics' Bank of Buffalo, United States' do.; Phœnix Bank do., Bank of Commerce do.; Bank of Brockport; Cattaraugus County Bank; Bank of Lodi; St. Lawrence Bank."

The Philadelphia Ledger of 17th says—

"At New York, the panic in reference to the "red back" notes continues as great as ever. They were all yesterday, or nearly so, refused by the brokers. The Farmers' Bank of Geneva and the Delaware Bank are the only ones which continue to be redeemed. It is highly probable that a great number of these banks must inevitably wind up. Many of the Safety Fund Banks are rejected. Most of the Buffalo, the Clinton Co., and the Commercial Bank of Oswego."

The New York correspondent of the Madisonian (of 17th) says that the notes of following New York banks, are selling at from 30 to 50 per cent. discount, viz.: "Binghamton, Farmers', Seneca Co.; Miller's Clyde; Farmers and Mechanics', Batavia; Manhattan Exchange; North American; North: United States Trading and Banking; Staten Island, Port Richmond; Union, Buffalo; and Western New York, Rochester." "Notes of as many as twenty other (N. Y.) banks are not bought by the brokers"—being in still worse credit.

By the heavy rains and rise of waters, much damage has been done to the Charleston and Hamburg railroad, by the carrying away of bridges, embankments, &c., and more was expected. A large part of the town of Hamburg was overflowed.

Virginia Bank stock sold at auction in Richmond lately, at 76. Farmers' Bank stock, at 90½. James River and Kanawha scrip, at 85.

March 27.

F. W. Gilmer, governor of Virginia, resigned his office on the 19th. We feel, in common with the great body of the people, and their representatives also, great regret for the loss of a chief magistrate, who has so ably and zealously sustained the rights and interests of Virginia. No successor has been elected; and the senior councillor will act as governor.

The Legislature of this Commonwealth adjourned on 22d, after a session of *one hundred and twelve days*, during which time the pay of members amounted to $75,264.

The Harrisburg Reporter says the banks will get no indulgence, and may therefore prepare to do as individuals have to do in cases precisely similar. Since, the bill for legalizing in the last fraudulent suspension (such as has passed almost in silence in Va.) has been rejected by the legislature of Pennsylvania. We trust they may not relax.

The Central Rail-road of Georgia was opened on the 11th instant, for the carriage of freight to the thirteenth station, a distance of 135 miles from Savannah.

The freshet in the South.—The Charleston Patriot of Wednesday last says, the whole low country about 50 miles from Charleston, on the Savannah route, is covered with water. The inhabitants have been forced to leave their dwellings, and most if not all the bridges on the road have been carried away and a great number of cattle in the vicinity of Edisto river have perished.

"We understand," says the Milledgeville Recorder "that the banks of Columbus have suspended specie payments. We have not seen the reasons for this course stated—the mails from that quarter having been stopped by the late inundation—but understand the only cause to be, to preserve for their community some circulation, which it was found impossible at that point to do, but by a suspension. All west of that point being in a state of suspension, the bills of the Columbus banks were hoarded and sold for a premium, not only to our own citizens, but to the whole trade of the states west of it, and brought immediately to the counters of the banks for exchange or specie. *Considering the acknowledged soundness of these banks, and the ability of their management, and that withal they have felt it their imperious duty to suspend more as an act to preserve their community than from any other cause*, we believe now that the resumption law will be maintained but by few banks in the state." In other words, all the banks of Georgia, were on the eve of confessing, what the depreciation of their notes sufficiently showed before, that they *did not* pay, and had not paid specie. The words we have italicized above will suit all such junctures. Bank suspensions are always dictated by pure patriotism and benevolence, and never by self-interest.

The President of tho United States has notified, through the heads of departments, that all interference of office-holders in elections, other than giving their own votes, and any pecuniary defalcation will be held as good ground for removal from office. An excellent rule, if fully executed.

The Africans of the Amistad have been discharged, in pursuance of the decree of the Supreme Court, and some of their white friends are already quarreling, and have gone to law, for possession of the minors among them. Whether minors or majors, we suspect that the poor savages will find freedom in Connecticut more intolerable than slavery in Cuba.

Latest foreign accounts.—The Steam-ship Caledonia arrived at Boston on the 20th, in 15 days from Liverpool. There is no very important news.

There was no material change in the prices of cotton.

An American ship for this country—the Gov. Fenner—was run into by the steamboat Nottingham on the 20th ult. and sunk—every soul on board but the captain and mate perished! One hundred and twenty-two lives lost! The passengers were principally Irish emigrants for this country.

There is nothing further from China.

The Circassians have gained further victories over the Russians. France is disarming.—*Madisonian.*

The panic in regard to "Red back" money in New York is subsiding, but about a dozen of the banks must be wound up.—*Ib.*

At this moment the whole commercial world is in debt to New York. The rates of exchange prove it. While those states which adopt the expansive and suspensive policy find themselves in debt to every body and trusted by nobody, the effect of the opposite

policy has been to draw capital and property here from all directions.—*Jour. Com.*

The last accounts from Florida (dated March 13th) state the war to be nearly brought to a close. About 400 Indians (men, women and children) are confined at Tampa, waiting to be embarked for Arkansas. Lieut. Albertis has recently gained the victory in two skirmishes with the savages who still hold out; and they are expected to be compelled soon to yield themselves prisoners.

The bad debts due to the Bank of the State of Alabama, and its branches, are officially reported by a committee of the legislature to amount to the enormous sum of $4,640,761. The loss will be suffered by the state.—*Ph. Ledger.*

TO CORRESPONDENTS AND READERS.

The editor has been suffering more or less under indisposition for the last three months, and recently has been so ill as to be unfit for any exertion of mind or body. The favors and the orders of his correspondents have therefore been unavoidably neglected or postponed; and perhaps other more important editorial duties have been even still more imperfectly performed. He hopes that this statement will serve to excuse all such apparent deficiencies. Sundry postponed communications will appear in the next number.

The mechanical operations of our printing establishment since January 1, have also been much retarded by sickness, causing the loss of much valuable labor which could not be replaced, and while the demands for work have been peculiarly heavy.

☞The second number of the 'SOUTHERN MAGAZINE AND MONTHLY REVIEW' is ready for delivery.

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